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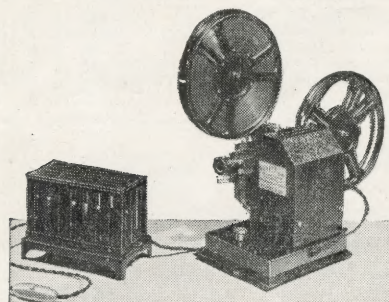
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Every effort is being made to secure that your copy of "Amateur Cine World" reaches you on time each month, but dislocation of transport due to air-raids is likely to cause occasional delays.

Should it arrive late, we would ask you to assist the newsagent by accepting your copy as usual. The Paper Control Order prevents him from returning unsold newspapers and periodicals and if a customer refuses to take his copy, the newsagent must bear the cost himself. Present conditions make the newsagent's work very difficult; he will appreciate your help and so shall we.

Gordon S. Malthouse
Editor

Well-Known Amateur Films for Home Showing

THIS number shows a departure from tradition. Perhaps it would be more accurate to say that it is not we who have departed from tradition, but that tradition has departed from us. The usual Christmassy articles are lacking, and in previous issues at this time of year there were always Christmassy articles. The spirit has not fled, but the opportunity to which it must be harnessed will be difficult to seize.

There will be family gatherings this year, but not, we think, many family parties. Re-union will certainly bring great happiness, but not so much festivity as before. So if the camera is used at these gatherings it will, for the most part, be used to record simple domestic scenes—not specially staged episodes. Christmas scripts and story films will go by the board.

But though few amateurs will plan to make Christmas films on an elaborate scale, we do urge that every amateur should make the effort to run off a few feet of film this Christmas. The re-union of families whose members have not seen each other for many months, the boy who comes home on leave... It will be little short of a crime to neglect the opportunity these present. When the gathering has broken up and the members of the family have gone their several ways, you will have a living record to remind you of them.

Animated close-ups will be the most effective, and are the easiest type of shot to obtain indoors. You will probably not want to expend any footage on the conventional shots of the Christmas dinner, before and after, and all the exciting preliminaries of carousal. You will probably not want to expend any footage on arrivals and departures. But close-ups of the family drinking the health of young Tom (father can't resist a wink at the camera, and mother gurgles into her glass) or sitting gossiping round the fire will have the irresistible appeal of all simple, human things. It will be your contribution to the preservation of the unity of the family—and a very vital contribution.

So bring out those Photofloods, buy a roll of film, sketch out briefly what you propose to take (so that you do not waste precious time on the Day) and give yourself up to the pleasurable task of realising to the full the unique potentialities of the cine camera for the recording of family life. Good shooting and a happy Christmas to you!

* * *

ALTHOUGH our suggestion last month, that owners of early amateur films should make them available for circulation and should send us details for publication, has not met with the response we had hoped, it has brought two interesting letters, which are published in this issue. One of them explains why the details which would have been so helpful have not, so far, been forthcoming. It is that in most cases there is only one copy of a film and the owner does not like it to go out of his hands.

But we were well aware of this objection, for like many other people, we have suffered at the clumsy hands of careless projectionists. The second reel of one of our films came back from a presentation with a deep scratch wriggling ecstatically down its entire length. Fortunately, however, the film was on neg.-pos. and was easily replaced—at our own expense.

But in our notes last month we were concerned more with films by societies than with films by individuals. And societies invariably circulate their films among other clubs. In many cases, too, copies are available. Cannot the older films, which have been circulated in the past, be put into a circulation again—now—at a time when they are most needed?

There is perhaps one important reason why not: the reluctance of the owner to saddle himself with the irksome duties involved in packing, posting, keeping check of the whereabouts and condition of films and generally acting as clerk and office boy for them. Can he be relieved of these duties which, everyone will agree, it is unfair to expect a man to take on without some recompense?

The Season's Greetings to Our Readers

Only by a responsible organisation with existing facilities for such work. Two that come to mind are the British Film Institute and the Federation of Cinematograph Societies. As mentioned last month, the latter has lost its library and would welcome the opportunity of forming another. And the Curator of the National Film Library mentions, in his letter in this issue, the need for a better representation of amateur films in the N.F.L.

Additions to both libraries must depend on the generosity of donors. So we have the anomalous situation of the amateur who wishes to perform a useful service having to do so at the expenditure of his own time or money. It is not quite as bad as that, of course, for preservation of his work in the National Film Library is an honour not easy to come by and certainly not to be bought; the incidental expense, indeed, might very well be regarded as the equivalent of the entrance fees charged by most professions.

But is there another answer to the riddle—another way in which the National Film Library can be stocked while providing a reasonable return to the owner of the film and ensuring that the films are available for hire to every amateur (not alone the clubs) in the same way that professional films are available in the substandard libraries? We think there is, but the success of the scheme depends upon you. You can make it or mar it. But we must leave consideration of it until next month.

THE EDITOR.

★ The introductory article to this series (published last month) dealt chiefly with the technique of double exposures. Next month our contributor will describe the travelling matte process—a development of back projection—and explain how it can be carried out by amateurs.



"TELEVISION"
by back projection. Produced by a 500 watt
Bolex projector and camera aperture of f/3.5.

BACK-PROJECTION is the direct descendant of the old stage back-cloth and the more recent film photographic backing. In principle it is simple to the point of being obvious. It merely consists in playing a scene in a set built in front of a translucent screen, upon which is being projected from the back a film shot taken previously. In other words, it consists of a photographic backing which can contain movement.

Of all the trick processes employed in film production to-day, back-projection is the one that is used by far the most frequently—so frequently, in fact, that it has ceased to be regarded as a trick at all, being nowadays normal studio routine. From being used only on the simplest type of scene, its scope has been enlarged more and more until to-day it is regarded almost as a panacea for all evils.

Effect of Introduction of Colour

However, the introduction of colour photography, and the resultant need for enormous quantities of light, has somewhat limited its scope. Although various attempts to overcome this difficulty—such as triple-headed projectors—are being tried with some success, it is possible that the travelling matte process, to be described in a later article, will come more into its own in the future as an alternative to back-projection.

Now there is one fairly obvious difficulty with the process. It is easy to set up a camera, a projector, and a translucent screen. It is easy to set the camera and the projector going simultaneously. But, although what is projected on the screen looks like a continuously moving scene to the eye, in actual fact it is nothing of the kind, but is a series of still pictures with gaps of darkness between them.

If the camera shutter should happen to be open during a period of darkness and shut while the picture is projected on the screen:

BACK PROJECTION

Solving the Problems of Shutter Synchronisation and Camera and Projector Speeds.

if, in other words, the shutters of the two machines are running at the same speed but are out of phase, then nothing whatsoever will appear on the screen in the completed shot. What can be done?

Well, in practice in the studio the difficulty is overcome by means of a three-phase A.C. linkage between camera and projector. Most amateurs will not have the money or facilities to instal electrical linkages of this type, and so it is necessary to think of something else. If the set is not very large, it might in some cases be quite possible to arrange a mechanical link between the two machines. But in most cases this will obviously be too clumsy to be practical.

Another Solution

There is, fortunately, another way out of the difficulty. Suppose we run the projector at double the speed of the camera—32 frames per second for a silent picture. There can now be no question of the camera and projector being in or out of phase. During one revolution of the camera shutter, the projector shutter will revolve twice.

This means that the camera will photograph either a full exposure on the screen of one frame of the back-projected film and will not photograph the next frame at all, or it will photograph a partial exposure of two successive frames of the back-projected film on the same frame in the camera. In either case the camera frame will get the same total amount of exposure, and therefore there should be no variation in density in whatever manner the camera and projector are started up. When using this double-speed method of back-projection, it is, of course, necessary to shoot as well as project the back-projection scene at double speed.

This method works quite well, but it has one or two small disadvantages. One is that, owing to the fact that the projector shutter

back, not uncommonly a distinct periodic fading appears on scenes photographed in this way. The back-projected portion of the scene will be light for a few seconds, then it will go dark for a few seconds, then light again and so on. This unfortunate complaint is due to two causes: first, the shutters of the machines are rarely exactly of 180° opening, and secondly, the two machines are unlikely to be running exactly at their correct speeds.

Look at diagrams A and B. The outer rings represent the projector shutter, the inner the camera shutter, and the arrow the camera gate. We have taken shutters with 135° openings. It will be seen that at A the

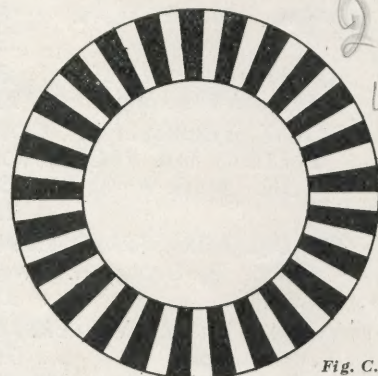


Fig. C.

film in the camera gate will receive exposure for a 135° movement of the projector shutter, or for about 1/85th of a second. But at B, with the shutters starting in different positions, exposure occurs for only a 90° movement of the projector shutter, or 1/128th of a second. Other starting positions of the shutters will give exposures between these two extremes.

Now if the two machines are running dead to speed, whatever the positions the shutters start in, they will always return to the same position after every revolution of the camera shutter, and exposure of the back-projection screen will remain constant, although it may vary in different takes. But if the two machines are *not* running dead to speed, but either varying from time to time, or one running just a little over or under twice the speed of the other, then the relationship of the shutters will gradually vary and we shall get a periodic variation in exposure from 1/85th to 1/128th of a second and back again.

The cure for the second of these two disadvantages is obvious, if difficult, from the foregoing remarks: it is either to arrange that your shutters are 180°, or that your machines are running dead to speed, or both. The former alternative may mean

By
GEORGE PELLINORE

must be closed for its full period (half the closed period of the camera shutter), once during the open period and once during the closed period of the camera shutter, the scene on the back-projection screen will receive only half the exposure of the remainder of the set. Now back-projection with linked camera and projector needs an uncomfortable amount of light on the screen, and therefore this cutting by half of the exposure on the screen is apt to be serious.

Another drawback of the process is that, in spite of our arguments two paragraphs

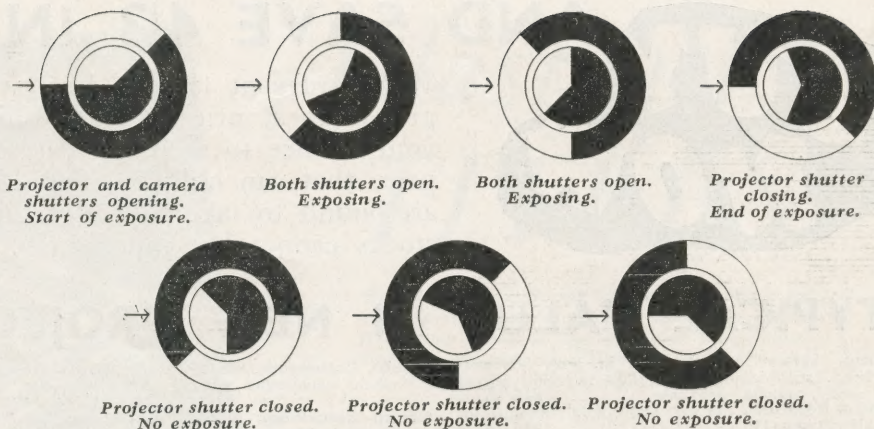
intricate alteration of the intermittent mechanisms, and therefore is unlikely to be practicable. The second can to some extent be achieved, even without resource to synchronous 3-phase motors.

Use of Stroboscope Disc

Diagram C is a stroboscopic disc for use with 50-cycle alternating current. If such a disc is illuminated by a glow lamp running on current of this frequency, it will appear stationary at certain speeds. This particular disc will appear stationary at 2 revolutions per second and 4 revolutions per second (probably a little blurred at the latter speed), and is therefore suitable for use on the driving handles of the camera and projector. The "Honeycomb" type of neon lamp, which can be plugged into a normal socket, and is frequently used as a night-light, is a suitable illuminant for such discs.

These discs will not, of course, ensure that the machines are running dead to speed—they will only tell you if they are not. However, if care is taken to see that the electric motors are thoroughly warm before shooting, and if care is also taken to ensure that as constant a load as possible is applied to both machines, there should not be much difficulty in getting reasonably constant speed. The nearer the motors are to constant speed, the longer will be the intervals between fading, so that if they are very near, the scene will probably be of sufficiently long duration before any fading becomes apparent.

Having more or less avoided the problem of shutter synchronisation, let us pass on to a few other points. First let us consider the screen itself. Pathscope at one time made a special translucent screen, and various suggestions have been made at one time or another for suitable material for this purpose. A matt celluloid material, sold under the trade name of "Celestoid," is an excellent substance for the purpose, but rather expensive. A very cheap form of screen, and one



A. POSITIONS OF SHUTTERS DURING OPEN PERIOD OF CAMERA SHUTTER.

("niggers" or "gobos," in studio jargon), screening the lamps from the back-projection screen. Such screens can easily be made, either out of plywood, or by stretching black cloth over wooden frames.

If he has not already got one it will be advisable for any amateur who intends to attempt back-projection to beg or borrow as high-powered a projector as he can. He should also use, for the same reason, a large aperture lens on both camera and projector. The "television" shot was made with the use of a 500 watt Bolex projector and an aperture of $f/3.5$ on the camera. The screen was approximately 15 inches wide.

It will be seen that, even using an $f/1.9$ or $f/1.5$ camera lens, a prodigious amount of light is necessary if anything like a large screen is required. Of course, the happy possessor of a Filmo-arc projector has many of his difficulties solved right away.

There is one other matter which is of great importance to most back-projection shots, and indeed to nearly all trick shots.

lorry running along in front of the car, carrying the camera and crew and the sound unit and recording gear.

Studio Shots Essential

Such a lorry must keep exactly the right distance from the car. A shot taken in this way will suffer from two independent sets of bumping—that of the car and of the lorry. The mike will pick up the wind noises, birds, engine noises, and all sorts of other sounds besides the dialogue. All this makes it almost imperative to shoot such scenes by back-projection in the studio.

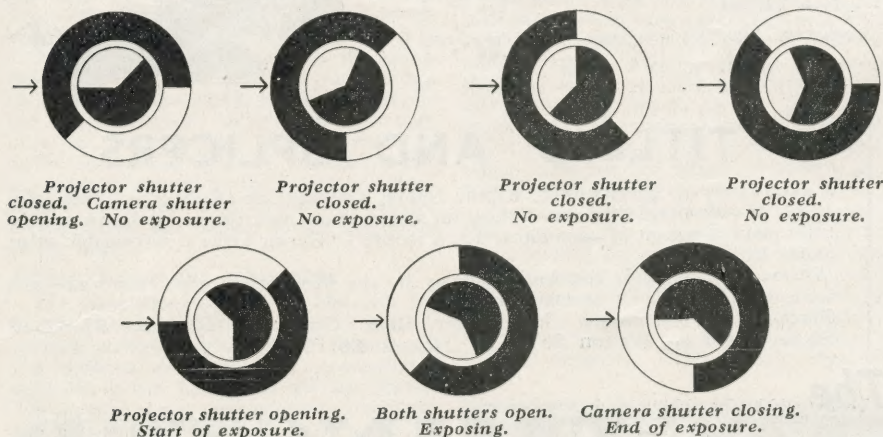
To do this, a special shot of the retreating road is taken from the back of a truck or lorry. Such trucks are generally designed with a long wheel-base to avoid bumping as far as possible. Then, after processing, the scene is projected on a back-projection screen erected behind a set of a car in the studio. So far, so good. But suppose that, during the shooting of the road scene, the road took a turn to the left. Then it will be necessary for the actor who is playing the car-driver to turn his wheel to the left at exactly the right moment—and he has his back to the screen. Here is our problem in timing. In this case it is very simply solved for it is quite easy for someone to signal to the driver the exact moment at which to turn his wheel, though it is remarkable how frequently one sees examples of bad timing in shots of this kind.

Immense Problems

But in modern back-projection the problems of timing are sometimes immense. Let us take one more example, from that magnificent film of a few years back—"Captains Courageous." Much of the action took place on fishing boats out in the Atlantic. All scenes of this sort involving dialogue were back-projected. There were examples of back-projection in this film where huge waves on the back-projection screen actually appeared to break over the boat and actors in the studio.

Consider what such a scene involves. Presumably a battalion of stage hands was concealed between a set of the boat and the screen, armed with buckets of water and hoses. Another battalion of stage hands would be instructed to rock the whole boat in synchronisation with the waves on the screen. And at the psychological moment, when a wave on the screen appeared to break over the ship, all these men had to act in unison—not to mention such people as the

(Continued on page 256)



B. POSITIONS OF SHUTTERS DURING OPEN PERIOD OF CAMERA SHUTTER.

that the writer has found quite satisfactory, is simple tracing paper. Care should be taken to see that it is stretched quite tight and flat, under which conditions it is very satisfactory.

Now a few words should be said about lighting the set, of which the back-projection screen forms part. It is essential that no direct light from any lamp shall fall upon the screen. If it does, it will at once kill the picture thereon. This can be avoided by introducing suitable screens on stands

That is the question of timing. In order to make this matter clear, let us take a simple example of a back-projection shot, an example which all readers must have seen in the cinema many times.

Imagine a shot of two people driving along a road in a car. They are chatting, and the road is seen disappearing away behind the car. There are many reasons why it is undesirable to shoot such a scene on location with a real car and a real road. It would mean that it would be necessary to have a



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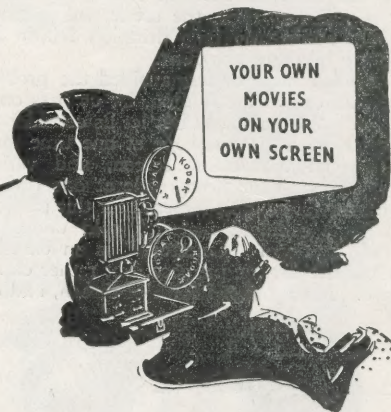
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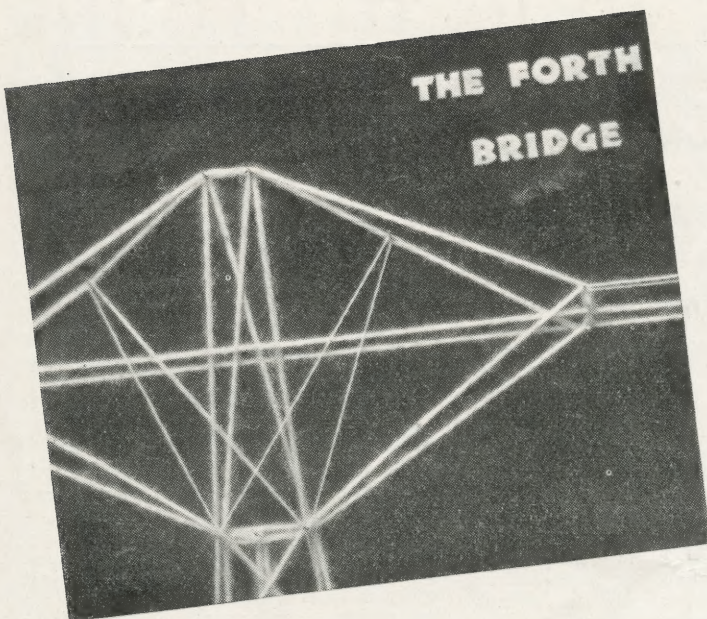
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The production of these titles—made out of tweeds, plaids rough homespuns, and wool—is described below.

Illustrative TITLES

The effectiveness of a film is helped enormously if the presentation of the titles echoes its mood. The author made a film of a tour in Scotland. What more appropriate than that the titles should be produced from Scotch cloths?

By **TERENCE V. STRONG**

woollen version of the bridge more reminiscent of the original than the rather poor shots I obtained during the tour.

The Loch Ness Monster was crudely animated by the 'upside down' method.

(Continued on page 255)

I HAVE a great antipathy to sub-titles. That is why I make a hobby of sub-titling. Contradictory? Yes, but mere dislike of the things does not render them completely unnecessary. Any type of film that can be given adequate continuity without the inclusion of sub-titles, gains by being so treated. For most travel and documentary films, however, titles in the body of the film are a necessity.

As these two types are the ones most commonly attempted by amateurs, it is necessary to make the very best of a bad job. With the exception of dialogue titles which have to be as unobtrusive as possible, it is desirable that a sub-title should do just a little more than interrupt the film to say its piece in white-on-black. Particularly is this the case when the sub-title says very little, as, for example, place-names in a travel film. It is, of course, imperative that any interest aroused by the layout or adornment of a sub-title should be strictly relative to the theme and helpful to the continuity of the film.

Titler Saves the Situation

The illustrations are from a film of a car tour in Scotland. Such a film invariably presents continuity problems. The material I had gathered after a fortnight's concentrated sight-seeing was scrappy to the last degree. The thought of these miscellaneous fragments projected on the screen and connected by bare sub-titles was depressing in the extreme, so I came to the conclusion that the titler must save the situation. The atmosphere of Scotland, I decided, is redolent of tweeds, plaids and rough homespuns. So the sub-titles were made exclusively from these materials, with the addition of white knitting wool. Amateur dressmaking runs in the family, hence no difficulty was experienced in obtaining fragments of various rough cloths. A discarded tie furnished the tartan material.

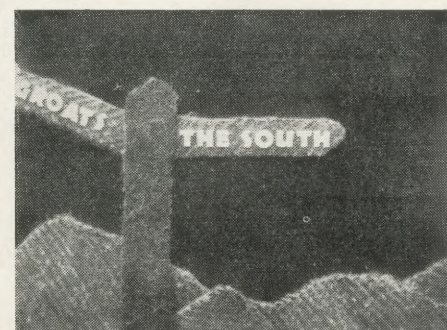
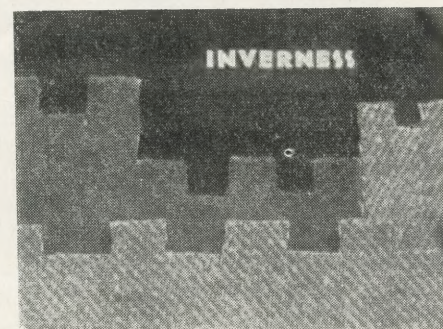
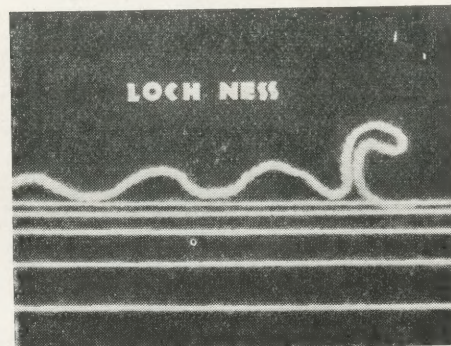
Most of the sub-titles were arranged to approximate in composition to the first shot

of the following sequence. The rest contained symbolic designs indicating the associations of the subject following. For example, the title to a Gretna Green sequence contained, besides the name, a bright tartan heart mounted on a more sombre background. The Inverness title is followed by a shot of the city in which the castle battlements are prominent against the sky. The waterfall title is similarly a foreshadowing of the actual scene.

Excellent Practice

The use of wool calls for patience, as this material seems to have a will of its own when it is called upon to conform to a predetermined design. Making up an illustrative title of this sort is excellent practice in the composition of actual views. The components of the picture are so completely under one's control that exhaustive experiments in balance and design are possible and, withal, profitable.

The Forth Bridge is also done in wool. The appearance of rigidity in the bridge was achieved by straining the wool around pins driven into the title board at the points of intersection. The heads were nipped off with pliers and as the shafts are normal to the board, they are scarcely visible from the camera viewpoint. For myself, I find the



DO IT YOURSELF!

practical ideas for the handyman

COMPLETING THE PROJECTION BOX

TO complete the projection box which I hope is now well under way in the workshop, some feet will be required. As the projector is fixed to the base of the box and permanently aligned to suit the window opening, any tilting arrangements will be useless, and provision for this will have to be made on the box itself.

Adopting the tripod principle for rigidity, two feet (castors or "domes" will do) are fitted as wide apart as possible, at the back where most of the weight is likely to be concentrated. A single adjustable foot is fixed in the centre at the front of the box. If the reader will refer to Fig. 3 in last month's

A $5/16$ " hole is run through the centre and the wheel sweated on to the shank of the bolt, close up to the head. Screwing the bolt in and out of the nut by means of the disc, a considerable degree of adjustment can be obtained. It will be noted that as the adjustable foot is bigger than the back feet, some degree of initial tilt is given to the case—a condition usually required in the home show, with the projector on a table and the screen hung on the wall opposite, somewhat above the level of the machine.

The inside of the case should be lined with thick felt, dyed black to damp-out noise and stray beams of light from the lamphouse. The metal fittings should be painted dull black. Some dealers supply an optical black; I can recommend "Enameloid," a dull cellulose black obtainable from the Liverpool Castings & Tool Supply Co., Ltd., 41, South Castle St., Liverpool.

Serviceable Finish

Leather cloth glued over the outside of the case makes a very serviceable finish. This can be the cheap variety from the sixpenny stores, but it is really worth using a good quality rexine. Brown rexine is obtainable at most household stores and drapers, but if black is preferred—and I think it looks much smarter—the local bookbinders will probably be the most likely place to get it. Two pairs of brass butts from the ironmongers; two pairs of attache case clips from the local hobbies shop for the doors; a suitcase

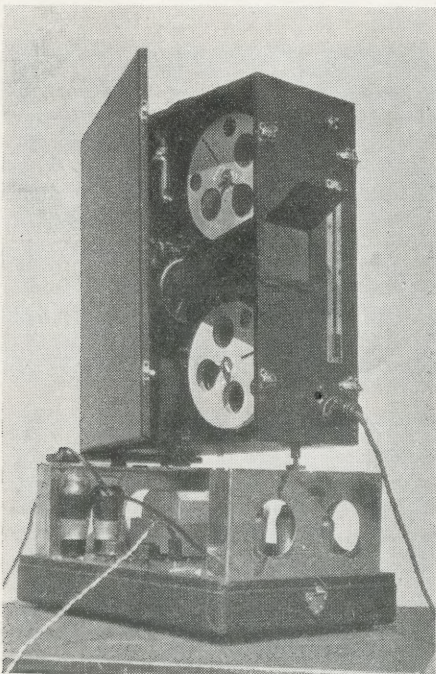


Fig. 1.

article, he will see that the foot is made up from a piece of thick sheet brass and a $5/16$ " Whit. bolt and nut, the "Bright Steel" variety being preferred.

A piece of sheet is cut and filed about 2" square. Four holes, one in each corner, are drilled to take countersunk screws for fixing to the case and a $3/8$ " diameter hole is drilled through the centre. The nut is sweated on to the plate with solder. Next, the head of the bolt is filed down to the form of a knob, and a search through the scrap box will perhaps produce a wheel or brass disc about one and a half inches in diameter. A knurled edge is made by nicking in "teeth" with a three-cornered file.

Its construction was described in last month's issue. Every month our contributor supplies a page of practical ideas: things to make and things to do. Suggestions for gadgets are welcome.

By G. A. GAULD, B.Sc.

handle from the saddlers, and the case can be finished off.

So much for the case and its bare essentials. But like most things, there is plenty of scope for refinements. The slide, on the right hand side of the window in Fig. 1, is a dimmer, which can be made to control either room or proscenium lights. As a dimmer is a job in itself, I will leave it for a later article. Another useful gadget is a pilot light arranged so that it lights up when the projector is switched off.

The Main Switch

The main switch has to carry a heavy current for the projector lamp and should therefore be of good quality, with a sharp "snap" action. It is of the "flush mounting" type and is fitted at the back of the case, as shown in Fig. 2, so that only the knob projects. If a pilot light is to be controlled as well, the switch will have to be a "3-way" type, i.e., the type used on a stairway, where the lights can be controlled from top or bottom.

The switch will be seen to have four poles or terminals, two of which are permanently connected, leaving two terminals free, one at the top and one at the bottom. Connect one mains lead to the poles which are linked together. The free terminal at the top is connected to the pilot lamp, and the free terminal at the bottom to the projector. The circuit to the other mains lead is completed in each case. A reference to the wiring diagram, Fig. 3 may make this clearer.

Bearing in mind that as the switch knob is pressed down, the tumbler also flips down, it will be seen that in the "up" position, the pilot lamp is on, and in the "down" position, the projector. A flush type socket should, of course, be fitted for the flex from the mains and is best placed at the back, out of the way, as shown in Fig. 2.

Motor Speed Control

It is convenient to bring the motor speed control to a position in which it can be operated from outside the box. The easiest method is to dismantle the rheostat on the projector and remount it at the back of the case so that the knob is accessible, as shown in Fig. 2. The connections will, of course, have to be remade with a couple of short lengths of flex.

The alternative is to make up another rheostat from an old wireless volume control.

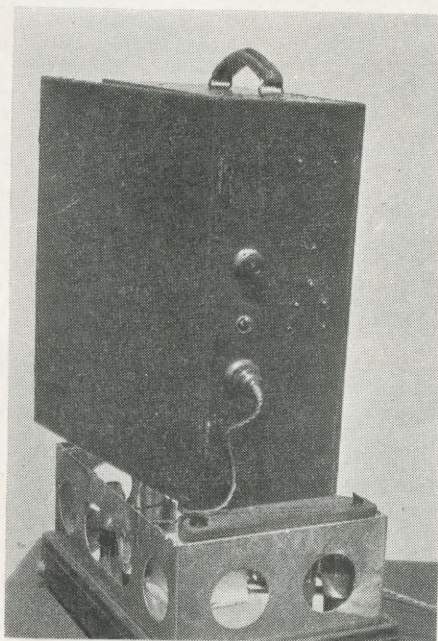


Fig. 2.

The resistance element will in all probability be too fragile for the purpose and a new one will have to be wound with suitable resistance wire. Some experimenting may be necessary, but the simplest method is to use approximately the same gauge and length of wire as that in the projector rheostat.

The projector control will now have to be cut out of circuit and the motor fed through the control mounted on the case. Do not supply the motor from an independent circuit off the mains, as most projector motors operate on the same voltage as the lamp after it has been reduced either by the main resistance or the transformer.

In addition to the dimmer, another small switch will be seen above the slide. This is a reversing switch for controlling a motor which operates draw curtains in front of the screen. I shall have more to say on this point later.

All the controls have been grouped as far as possible on the case itself, so that we have something approaching a complete projection room in portable form. It will be obvious that in addition to the incoming mains lead, there will be an outgoing lead, the number of wires depending on the number of external circuits under control. In this connection, it is useful to remember that an old five or seven pin valve base and socket to match can readily be utilised as a simple means of plugging the multi-wire cable into the projection box. This outgoing cable is shown at the front of the case in Fig. 1.

BLUE-BASE GLASS FOR PROJECTION PORT

Reader's Hint for "Do It Yourself"
Projection Box

Sir,—The article, "Suppress your Projector," in the November issue, was of particular interest to me as I have had such a box in use for a long time and can vouch for its usefulness, particularly when a quiet musical background is necessary.

I have one tip which I should like to offer, and that is in the type of glass used in the box aperture. We are accustomed to think of the light on the screen as being white, whereas, of course, there is a large proportion of yellow in its composition. This yellowness has a definite action on the tonal values of any projected film, and like many other ill-effects, it is not realised how derogatory they are to the presentation until they disappear.

The remedy is to insert in the aperture a glass with a very slight blue base. The piece I use is part of an old radio set dial, and by great good luck the amount of blue is just sufficient to neutralise the yellow without giving the picture a bluish tint. The effect is like washing a dirty picture and showing a sparkling reproduction that enhances the image to a great degree. Most of your readers will have noticed the crispness of a film in the super cinemas as compared with one in the smaller theatres. In this case, of course, the effect is arrived at by the blueness of the H.I. arc as compared with the low intensity arc.

Swanley, Kent. G. F. WARNER.

Set-Ups for COLOUR

STEREOSCOPIC FILMS

This is the third and concluding article in the series, and deals with the practical application of the principles discussed in the previous two articles. The work admittedly presents difficulties but is certainly justified by the results.

By

GEORGE H. SEWELL

A.R.P.S.

HITHERTO we have been dealing with broad principles. The application of these principles entails some pretty little mechanical problems. Whether the complementary colour filter method or the polarising filter method is used, the experimenter is faced with the need to make pairs of exposures in absolute synchronism of a character as identical as possible (apart from the difference in view points) and then to project the resultant pairs of pictures in similar synchronism.

The ideal would be, in both camera and projector, a twin instrument with a pair of carefully matched lenses, and a pair of film transit mechanisms, shutters, etc., driven from a single power unit in each case with, in the camera, the pan and tilt and diaphragm pairs each linked to a single control, which operates simultaneously and equally on the component in each half of the mechanism. This condition is more difficult of attainment in the pair of cameras than in the pair of projectors because of the smaller and more limited power unit and the greater mobility which is essential to the working of the camera.

I have been carrying out my stereoscopic experimentation in conjunction with my friend, Mr. S. W. Bowler, F.R.P.S., and although the extent of our work has to some degree been limited by the fact that we have confined ourselves to apparatus which was immediately available, we have obtained sufficiently successful results and enough experience to indicate the lines on which further developments may be conducted.

It is utterly important that each pair of stereoscopic exposures should have as nearly the same characteristics as is humanly possible. For this reason the same make of lens and the same type of that make should be used in each camera. The more advanced worker who can afford it will have a specially chosen pair of objectives selected for him.

The two cameras, also, should be of similar make and type. That is necessary because

IT HAPPENED TO ME!

As a movie maker you have met with some interesting experiences in the practice of your hobby: incidents grave and gay, contacts that have led to unexpected happenings, disaster that blossomed into triumph. The production of any film cannot be entirely uneventful. One reader tells us of a chance meeting, when on holiday, with a famous film star—of how the star not only acted a small part for the amateur's camera but also co-operated in the production of the film. Ourselves, we remember the occasion, in Switzerland, when we dropped all our film and exposure meter down a crevasse and how, had we realised the breath-taking trouble we should have been put to to recover them, we should have been very content to have let them remain there.

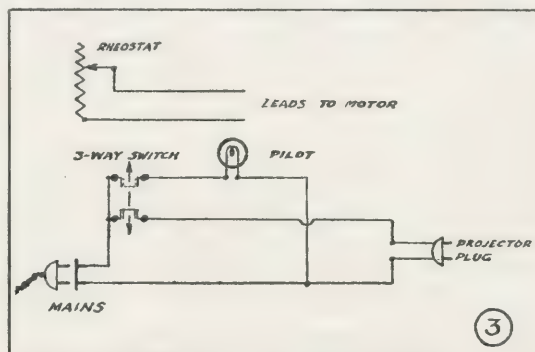
Tell us about **your** experiences! There is no closing date for entries, for this is not a competition in the accepted sense of the word, nor is the prize the usual half-a-guinea, but payment at our standard rate. Length should, preferably, be not more than 750 words, and please write, or type, on one side of the paper only. Address on page 231.

the pull-down time and shutter-exposure time vary in different cameras. The diaphragm openings in the two instruments should be clearly marked, and it may prove desirable to put some additional sub-divisions in another colour to permit of finer adjustment of the apertures. These markings can be arbitrary even divisions of the spaces between the original diaphragm aperture indication lines.

It is quite impossible to ensure identical speeds between two cameras operated by separate clockwork motors, however efficient the governors. From the moment that such a motor is started, the power starts to diminish and the speed to drop very slowly. There are also uneven surges of power so that the diminution is not even throughout the run of the mechanism.

My colleague and myself got over this in our earliest experiments by doing 'stop motion' work with puppets and with simple shapes like cubes, cylinders and spheres.

(Continued on next page)





Note how the angle, by making the tree-feller loom large, suggests ponderous strength. A high angle has the opposite effect.

We found it possible to carry out some intriguing patterns in movement in three dimensions, much as the choreographer designs the movements of his *corps de ballet*. We essayed a short fairy story sequence in full colour, using coloured dolls and puppets, and coloured plasticine which was built up and altered in shape between shots to produce some mysterious and beautiful effects. We only hope that the day may come when cinematographic stereoscopy in colour will bring us the art of Disney in plastic form to exploit all the marvellous possibilities of the extra dimension.

In setting up for these close-up arrangements, parallax must be taken care of. We found it a good plan to set up a small pillar or stick in the centre of the field which was to contain the action, and then to direct each camera towards this marker, making it the centre of the field and focussing upon it. A small aperture, of the order of $f/5.6$, should be used, so that there is little or no loss of sharpness throughout the whole depth of the picture. Lighting should be simple in character, with a general somewhat flat light overall, and a highlight superimposed from one source. Some back lighting is permissible, but should not be too hard or overdone.

More recently we have been carrying out the conversion of a pair of Agfa cameras of the 40 feet cassette type mentioned in the article "Camera Conversions and Alterations," in last month's issue. The interiors of the two instruments were stripped in the manner indicated in that article, and the clockwork motors removed. The pair of cameras was mounted side by side on a common baseboard, by means of the ordinary

Colour Stereo Films

(Continued from previous page)

bushes, with freedom to rotate around the point of contact through two or three degrees, permitting adjustment for parallax on close-shots. The baseboard is marked with a central sighting line between the two instruments, and this line is pointed directly towards the subject. A pointer on the front of the base of each instrument can then be adjusted against a scale of radial lines, which indicates the extent to which the two cameras are converging. These radial lines should be marked with the distances focussed upon rather than with the actual angle.

The unit drive for the two cameras is transmitted from a powerful Garrard clockwork motor to a horizontal shaft which is mounted below the platform supporting the two cameras. From this shaft a chain drive is carried upwards to a toothed wheel projecting from the side of the camera casing, through the original winding aperture and engaging internally with the gear wheel shown in the top centre of Fig. 2 on page 211 of the November issue. To accomplish this connection, use is made of the internal peripheral gear of the main-spring-casing, the spring itself being discarded.

No attempt has been made to link the two diaphragm aperture controls, but great care

***** ECONOMY IN PROJECTOR LIGHTING

JUST as the projector light output is not doubled by doubling the wattage of the lamp in use (as they all delight in telling us) so, conversely, reducing the wattage by half does not halve the light obtained. In other words, it is a good lamp economy, in the case of a 500 watt machine, to use a 250 watt lamp for home shows—up to 4-foot wide pictures on a beaded screen, say. The 250 lamp is cheaper to buy and lasts longer. This change cannot be made if only a single resistance is available with the machine, however: though when a transformer is used lamps of any wattage can be interchanged at will.

Another economy, in that it increases lamp life, is slightly to *undervolt* the lamp—by setting the resistance or transformer input to 10 volts *higher* than the actual mains voltage. For example, if the mains voltage is 240 but the setting is made for 250, then instead of the normal 100 volt output, only 96 volts will be given. Thus the lamp is spared a little, with scarcely detectable effect on the light output or colour.

is exercised in setting them independently. A wire frame finder has been set up above and centrally between the two cameras.

This system, although somewhat clumsy, is quite practical in use, and its very massiveness brings two advantages. One is the long run obtained with the large motor, and the other the fact that the operator is forced to use a tripod. The tripod is fitted with a T-shaped double-level of generous size. It is particularly important that the camera should be set up laterally horizontal.

An important factor, about which there has been and will still be, much dispute, is the horizontal lateral separation of the taking and viewing lenses. In cinematography the second point seldom arises.

The human eyes are separated to an average distance of 63mm., or $2\frac{1}{2}$ inches, between centres. The camera lenses can be separated to this distance or, if expediency requires, may be set apart to any degree up to 3 inches. If we use the smaller distance, then it can be considered that all conception of solidity will cease at a distance of about one furlong, i.e., 220 yards. It is also necessary that the farther away the background is from the camera, the greater will be the distance required between the object and the background in order that any separation in space may be perceived. As an example, if a background is 50 yards from the camera, the object must be at least 10 yards, or one fifth of the total distance, in front of it.

Stereogram of Saturn

In other words, we come back to our early premise that stereoscopy depends on the two eyes perceiving different views of the same subject, and that beyond a certain distance the two images are so nearly identical and the direction of the optical axes so nearly parallel that the impression of solidity ceases, *even in the viewing of actual objects*.

If the two lenses are more widely separated, the result will be that known as *hyper-stereoscopy*. By separating the two lenses to relatively enormous distances, apparent solidity can be given to quite distant objects. The method will not often be available to the cinematographer, as the necessity for perfectly synchronised film transit necessitates the comparatively close placing of the two camera units, but as a point of interest, Mr. J. Moir Dalzell, in his fascinating and intriguing volume, "Practical Stereoscopic Photography," mentions the making of a stereogram of Saturn with its rings and train of satellites. This group is 790 million miles away from the earth, but by allowing twenty-four hours to elapse between his first and second exposures, the operator secured the equivalent of a lateral camera displacement, or working base, over 1 million miles long.

The pair of cameras set up as described above can be used for either of the two systems. In one case the appropriate colour filter is slipped in front of each lens, and here comes one of the snags. Fully colour sensitive panchromatic film must be used, but even with this the exposure multiplication factor for each of the two filters used will not be identical. The two factors should be as close as possible, otherwise the use of widely differing apertures will result in differences in depth of field in the two

pictures which may mar the results obtained. The relative factors vary with different types of stock.

Polarising filters do not bring this complication, the factor being identical in both cases, whatever the type or make of stock. The two polarising filters are placed before the camera lenses in the vertical and horizontal settings respectively.

Fast panchromatic film should be used, particularly at this time of the year, in order that small apertures may be employed. This will give good depth of field. It is also most important that an ample pair of lens hoods be employed. Another important requirement is that both reels of film should be from the same batch. There are observable speed differences between different batches of the same make and type of film which would result in uneven exposures in the pairs. When sending the film for processing, the nature of the exposures should be mentioned, and the need for identical treatment stressed.

I have previously referred to methods of projection and synchronisation of the two projectors, and nothing further need be said upon this point except that projection of polarised light pictures must be on to a metallic surface. This condition is fulfilled by the so-called 'silver' screens, which are metal sprayed. The use of other screen surfaces, e.g., white or glass-beaded, causes the light to become de-polarised.

Stereoscopy with a Single Lens

Since I began these articles, my attention has been drawn to single-lens stereoscopy by two articles contributed to "The British Journal of Photography" (the issue for September 13th and 20th, 1940), by Mr. H. A. Robinson, B.Eng., M.R.S.T. I have not myself experimented in this field because, as far as I am aware, no attachments are made of sufficiently small size to be suitable for use with the substandard cine camera. The method does, however, appear to offer considerable possibilities, and is worthy of consideration here.

Briefly stated, an attachment is placed before the lens in the camera, designed in such manner that the subject is observed through two apertures which are spaced apart a predetermined distance. The two sets of rays are then brought together and pass through the camera lens, whence they again diverge to form two separate and distinct images upon the focal plane.

The Stereoly Attachment

Typical of these devices is the Stereoly attachment designed for use with the Leica camera. This consists of a horizontal box, with two square apertures at the extremities of its front and one central aperture at the back. The latter fits over the Leica lens and the attachment is designed only to work with 50mm. lenses. The attachment is unsuitable for the substandard camera because it covers the whole field of the normal Leica frame, which measures 36mm. wide by 24mm. deep, and the centres of the recorded negative pictures are thus 18mm. apart.

One limitation imposed by this system is in the range of permissible apertures. In any case, an aperture larger than $f/6.3$ is not desirable owing to loss of depth of field, while a smaller aperture than $f/9$ tends to cause vignetting. Further, the multiplication factor for exposure varies with the aperture used. In this system the images are recorded

by the outer portions rather than by the central portion of the lens, but with a first-class fully corrected modern anastigmatic objective this does not introduce noticeable loss of definition.

The Stereoly device can be fitted with a double filter holder into which could be introduced either complementary filters or polaroid filters at will. In fact, the Polaroid filter method is recommended by Leitz for use with the Leica and the Leica still projector, to give enlarged 'still' pictures upon a screen.

Mr. Robinson also describes a device known as the Sterecap, which comprises four surface-silvered mirrors. The two outer mirrors are spaced apart laterally, and accept the two separate images from the subject. The rays are then turned inwards toward

by direct projection, the two images occurring side by side.

A possible method of examination which occurs to me is in a small projector of the 'business' type, in which the image is projected on to a relatively tiny translucent screen. If each half of the screen is stained to one of the complementary filter colours (or filter gelatine is placed adjacent to the screen), the results can be viewed through a pair of glasses equipped with the correct complementary filters. It would be less easy to introduce polarisation into this viewing system, as the light must be polarised at some point between projection lens and screen, and in any case the screen would depolarize the light.

It would appear practical to employ the Sterecap upon the lens of the projector itself,



A large expanse of water usually looks disappointing on the screen, but here the shot is saved by the reflection of the clouds. Notethatthere are not equal areas of sky and water. A skyline that cuts right across the middle of a picture breaks it into two halves and divides the interest.

the centre, where they impinge upon two other mirror surfaces which bend them backwards through the camera lens. The two images pass through opposite edges of it, and then across over to form a pair of separate inverted records. If the film is then examined it will be found that the two pictures are in correct relation and right way up. It thus becomes possible to view them

thus securing wider separation of the two images, and therefore a large picture. The two outer mirrors of the Sterecap can be adjusted through several degrees, so that it should be possible to overlap the two projected images, at the same time introducing the complementary filters and analysing the projected result with appropriately filtered spectacles.

CLEANING THE GATE

A FACT that needs emphasising, particularly to operators new to the game, is the ineffectual nature of attempts to clean the projector gate by using a brush or a corner of a handkerchief. Neither of these methods, except by mere luck, will dislodge those tiny lumps of emulsion-cum-dirt which build up from time to time on the gate slides, generally immediately above the claw slots. By dismantling the gate and pressure-pad the lumps can be seen and removed by rubbing fairly hard with clean, soft cloth.

A careful examination by eye and feel (back of finger nail) should be given: no lump may build up for several reels, then one will appear for no apparent reason—due probably to certain conditions of heat and humidity. Where the gate is not easy to detach, the best "between-reel" safeguard is a piece of cardboard cut exactly to film width, pushed up and down the film path, care being taken to see that the claws are withdrawn.

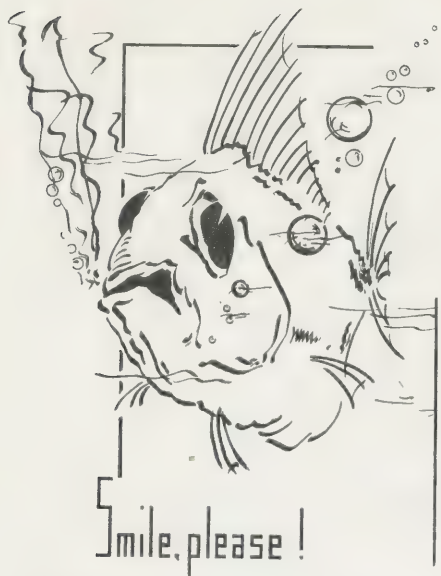
It is remarkable, but true, that to a sensitive operator the presence of one of these lumps of emulsion can be actually heard, by difference in the tone of the machine due to the extra gate friction.

COLOUR TO THE FORE

Although the war has played havoc with the overseas market, Cecil B. De Mille announces that his next three pictures will be in Technicolor. Reason is that his latest film, "North West Mounted Police," opening in London on Nov. 25th, was finished in nine days less than schedule at considerably less than budget cost, demonstrating that a colour picture could be made with no unexpected overheads, and relatively as fast as the same film could be produced in black and white.

The composition of all key scenes was plotted beforehand by means of detailed sketches, camera angles were mapped out on miniature models of all principal sets and each scene was rehearsed thoroughly days before the actual shooting. Thus takes were kept at a minimum and retakes eliminated.

Mr. J. W. Mitchell, 19, Wensleydale Road, Hampton, Middlesex, asks if any reader can loan him 9.5mm. films for showing to the troops. He has exhausted his own collection.



Smile, please!

There's a fascinating topsy-turvy world under water waiting to be captured by your camera. This short series of articles will tell you how to go about it.

World Under Water

cinema style, towards the end. A naked native diver, knife gripped between his teeth, plunged in and had a running (or should I say 'swimming'?) fight with a man-eating shark. Needless to say, he emerged triumphant and breathing hard!

Now I never forgot those films. I had neither the means nor the opportunity of chartering a special barge for a voyage to the West Indies, but I could see no reason why some fascinating results should not be obtained in the more humble rivers and ponds near my home. It was simply a question of fixing up the camera in some sort of water-tight case. While I have not had sufficient patience to await the timely approach of some prowling fish who would come up to the camera in response to my "Smile, please!" I have obtained some excellent results in a weedy river where the current was sufficient to sway the delicate fronds to and fro.

By

ALAN KOBOLD

THERE is nothing particularly new about taking moving pictures under water—at least, for the professionals. The film industry has been established long enough for adventurous camera men to exhaust most of the possibilities for novel film subjects. Ponting filmed the penguins with Scott in the Antarctic; the Johnsons wandered with the pigmies in equatorial Africa before "talkies" were thought of; and one man took his camera where none had been before. George Williamson explored the bottom of the sea.

It is a long time ago since I saw those films, schooldays, in fact, when it was not quite the thing to go to the "pictures." The show was given in the local hippodrome in the form of a lecture. Not only did we see those wonderful films but we were told and shown how they were taken.

Williamson chartered a special barge from the bottom of which a flexible steel tube descended some forty or fifty feet below the surface of the water. At the lower end of the tube a steel chamber was suspended, shaped something like a thistle-head on its side. Access to the spherical part of the chamber was provided by ladders

Plenty of Scope

There is plenty of scope for developing this exciting form of photography. For instance, the kid sister or Cousin Mary may be an excellent diver. Why not an under-water shot of her emerging from a cloud of bubbles as she cleaves the surface, followed by a mermaid's smile as she glides past the camera? It would be a novel variation on the inevitable slow-motion shot which usually accompanies an exhibition of diving and I can almost hear the audience asking, "How ever did you take it?"

Work with a tank, one side being made of plate glass, offers great opportunities: a mimic naval battle might well be staged within its confines. The deep sea diving drama becomes more than a possibility. A model diver can descend to the ocean bed and retrieve Captain Kidd's treasure chest, and the man-eating shark provides the thrills. To add to the excitement, close-ups of the horror-struck diver's face can be made by shooting him in a "property" helmet against a dead background and superimposing the sea effect by a second exposure taken from the bottom of the fishpond.

Unusual Conditions

Next month I hope to describe the apparatus I have used. In the meantime, it might be as well to examine some of the conditions we are likely to experience in this novel medium. It is obvious that an object under water is illuminated by light from above which penetrates below the surface. There is, however, a reduction in the intensity of the illumination, first, owing to the fact that there is a partial reflection of the rays incident at the surface and only a percentage of the light passes through to illuminate the object below. Secondly, light is rapidly absorbed by the water itself, owing to the suspended matter it usually contains. In a reasonably clear pond or stream, however, this should not be a troublesome factor at the comparatively shallow depths at which we shall be working. The nature of the lighting is modified by refraction.

Looking into this question of refraction, we find a new and curious state of affairs. Referring to Fig. 1, a ray of light striking the water surface normally as "A" will penetrate without deflection and with

(Continued on page 251)

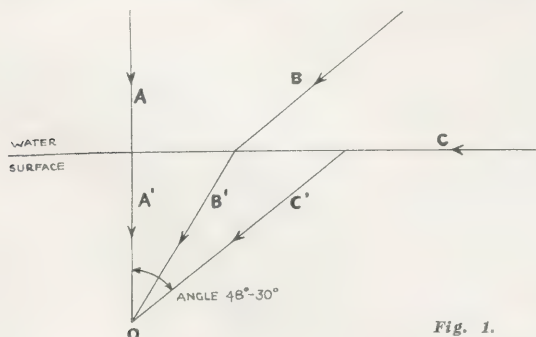


Fig. 1.

in the tube and Williamson took his camera down into the chamber with him. At the end of the "funnel" of the "thistle," a thick sheet of plate glass, some six feet in diameter, was fixed and the submarine photographs taken through it.

Most of the films were taken in the clear waters round the West Indies and extraordinary scenics were made of the waving seaweed and delicate coral forms, as well as astonishing shots of uncanny fish which came and peered in at the camera in the most curious way. We were given the thrill of our young hearts, in the good old

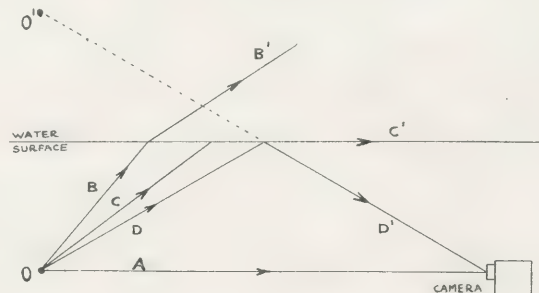


Fig. 2.

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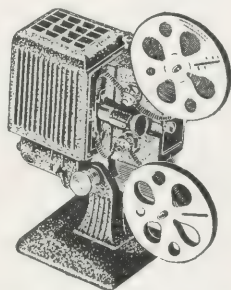
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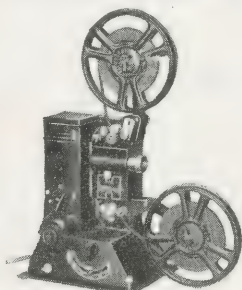
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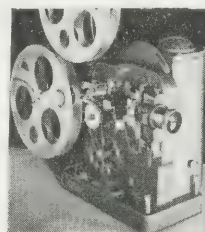
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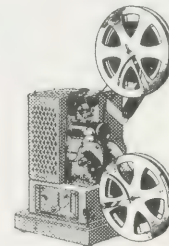
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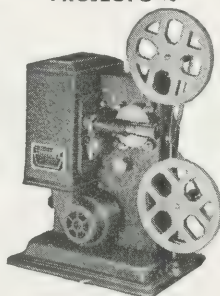
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FAMOUS LIBRARY FILMS

I. "THE WHITE HELL OF PITZ PALU"

BY HAV BULLEID MA

PITZ PALU is no mere dramatic figment of some author's invention; it is a famous peak in the Swiss Alps whose lofty heights command a picturesque valley.

Dr. Arnold Fanck was renowned for mountaineering films such as *The Sacred Mountain* (1927, with Leni Riefenstahl and Luis Trenker); and G. W. Pabst was even more renowned for films with personal and psychological themes—*Joyless Street*, 1925, with Greta Garbo; *Secrets of the Soul*, 1926, with Werner Krauss; *Loves of*

Production ..	Sokal Film, Berlin, 1929.
Trade Review ..	June 5th, 1930.
Length ..	7,293 feet (8 reels).
Directed by ..	Dr. Arnold Fanck and G. W. Pabst.
Photography ..	Hans Schneeberger, Richard Angst and Sepp Allgeier.
Scenario ..	Fanck and Pabst and Lad Vajda.
Design ..	Erno Metzner.
Players ..	Gustav Diessl as Dr. Krafft Leni Riefenstahl as Maria Ernst Petersen as her husband B. Spring as Christian Ernst Udet as the Airman
Sub-standard availability :	Ensign Library, 8 reels, 16mm. Wallace Heaton, 8 reels, 16mm. Patheoscope, 4 reels, 9.5mm. (equals 3,000ft. 35mm.).

Jeanne Ney, 1927, with Brigitte Helm; *Pandora's Box*, 1928, with Gustav Diessl, Francis Lederer and Louise Brooks. Then came *Pitz Palu*, followed by *Westfront* 1918 and the famous *Kameradschaft*. Fanck followed with *Avalanche* and *The White Flame*. Small wonder, then, that when these two directors worked hand in hand on a simple but authentic story set against Palu's grim majesty, they produced a film which vividly depicts the character of the mountain as well as of the handful of humans involved.

The story is simple: a honeymoon couple on Palu meet a Dr. Krafft and hear the story of how he haunts the mountain after having tragically lost his wife there; against a guide's advice they set out to scale the North Wall; they get trapped and are seen by a party of students who are killed in attempting to reach them. Search parties set out by torchlight and at dawn a plane is sent and at last locates them. Finally the searchers reach the young couple, but Krafft has sacrificed his clothes for them and has gone to join his wife in the White Hell of Pitz Palu.

Brilliant Narration

This story is brilliantly narrated in terms of screen action, and in addition it is a framework on which is hung the epic theme of man's struggle against the mountain. This theme is subtly emphasised by contrasting incidents in the narrative which show the mountain in all its various moods; we first see it in sparkling sunshine...the honeymoon couple are introduced, and Palu smiles on them.

Then comes a foretaste of the dangers, in the doctor's story. Then a suggestion of the thaw, at sundown, and the guide's warning—disregarded, when the three set out on the calm and inviting slopes at dawn. Then the accident, at which Palu stands aloof while the human batters himself on a minor precipice. Then the ominous rumble of the falling snow, and a party of students is blotted out, hurled into a deep chasm. And the bitter cold of night with wind and fine snow, and searchers setting out with torches like pin points

on the mountain side, up crags and deep down into chasms of ice, chill glittering tombs where the students are found.

Then another dawn, and ironically sparkling sunshine, and a 'plane like a fly over the lofty peaks. Then again the mists begin to rise, and bitter coldness returns, but the searchers find the couple, preserved from death though Krafft has given himself up to Palu. And in the valley there is brightness and sunshine, and the dangers of the mountain are remote and almost unreal.

Such are the story, theme, and treatment-synopsis of this famous picture; and before proceeding to analyse it in respect of direction, photography, acting and montage, there are a few points worth noting. Production was completed on location (round and about Pitz Palu) in the summer and autumn of 1929. The few interiors, of the hut, church, and glimpses of houses, were also done on location, lit by daylight plus portable supplementary lighting. Pabst and Gustav Diessl were "ex-studio," but Fanck, Leni Riefenstahl, and the other players were experienced climbers. Captain Udet, the airman, was a famous war-ace.

Virile Contrast to Talking Films

The film was handled in England (and America) by Universal Pictures, and released in February, 1931, when it was received with acclaim everywhere, as a fresh and virile contrast to current talkies which reeked of the studio. Contemporary talkie releases were *All Quiet on the Western Front*, *The Big House*, *The Blue Angel* and *Holiday*. A specially-written musical accompaniment was synchronized with *Pitz Palu*, and later an alternative version was offered, with a "dramatic commentary" at certain parts of the film. The public showed good taste by preferring the original version; and it is of great interest to note the remarks of the reviewer in the trade paper, "To-day's Cinema," dated September 6th, 1930:

"The commentary is well done, but is redundant, and although it occurs quite seldom, it never fails to be intrusive. This picture,



Krafft leads Maria and her husband up the glittering icy slopes. Camera position chosen to give maximum back lighting, which causes a brilliant sparkle on the ice.

(The stills, on these pages, from "The White Hell of Pitz Palu," are reproduced by courtesy of Messrs. Patheoscope, Ltd.)

in fact, is the final answer to the question 'will silent pictures disappear?' Such silent films as 'The White Hell of Pitz Palu' will always be welcome, wherever there are audiences to react to a stirring tale of human endeavour, incredible danger and sheer beauty."

The sub-standard 16mm. prints are complete; but the 9.5mm. version has been reduced to just under half the original. This results in a certain loss of characterisation, some continuity jumps and a bunching-up of incident; but it has been cleverly done; the spirit and all key sequences remain, and in view of the widespread use of this version it will be used as the basis of the survey that follows. It remains finally to remark that the film was shot, and is intended to be shown, at 20 to 22 frames per second.

Vivacious Action

Pabst opens his film in a light key, catching at once the spirit of the honeymoon couple and of Palu in a smiling mood. Sparkle is achieved by vivacious action and flying snow photographed in hard focus. Then back to the hut where the man has rigged up a birthday cake and candles—a neat bit of character comedy when the girl peeps through her fingers at this surprise, then a good first title. "Your birthday, Maria—and our honeymoon—on Palu." They pick up the log-book in the cabin and find the tragic entry by Dr. Krafft on the occasion when his wife failed to return... "Maria did not return. She is in the North Wall."

At once sinister significance is attached to the North Wall, and it was a point of ingenuity to give the same name, Maria, to both girls: a bond of sympathy is evoked. The living Maria looks up, in a beautifully-modelled close-up, and we follow her gaze, and see



Snow, sunshine, shadow and sky perfectly composed and rendered in a typically majestic shot of Palu's vastness. (This shot does not appear in the 9.5mm. version.)



At last the searchers reach the ledge where Maria and her husband are huddled together in the snow. Coldness is emphasised by softer photographic tones and a more rambling composition.

through the cabin window the North Wall, the scene of the tragedy. The husband recalls how Dr. Krafft now haunts the mountain, and at his very words there is a great gust of wind that blows out the birthday candles and we immediately cut to a low-angle shot of Krafft in the doorway.

Now follows a typical Pabst intimate sequence wherein every shot is cut on action so that one hardly notices the changes of camera angle. The two are nervous and make a business of taking Krafft's rope and making tea, and the husband fidgets more and more, and eventually goes out. Krafft's nerves are shown to be on edge by his subjective reaction to a dripping icicle seen through the window.

Maria is filled with sympathy and persuades him to tell his story, which is done in a flash-back...we see him and his wife and Christian, the guide, on the North Wall, and the slides are starting, so Christian shouts a warning from above. Krafft's head is shown in close-up in the bottom corner of the frame as he shouts reassurance, and follows a close-up of his hand gripping the rope: they proceed downwards, his wife leading: she passes out of the frame, then cut to M.S. of deep chasm, the shot being held 35 frames before she enters. This is a superb example of emphasis by disregard of the normal method of removing static frames before the start of the action. The chasm at first seems small and picturesque; the appearance of the human figure in the top corner of the frame instantly adds sinister significance. Then:

- M.S. Krafft watches her progress...
- M.S. the rope between them tautens—
- L.S. a huge block of ice breaks away from the heights...
- C.S. Krafft looks up—looks round in horror—
- L.S. the ice falling
- C.S. Krafft jerks his head round, shouts warning—in three short shots the block crashes down...
- C.S. Krafft shouts again—
- M.S. the block lands on the rope—
- C.S. the girl screams—
- L.S. a further fall of ice and snow—
- L.S. the girl is swept away...
- L.S. ... over a precipice...
- M.S. Krafft pays out rope...
- L.S. the girl falls deep into a chasm

Then mechanically Krafft pays out more rope, though he knows it has broken, and the sequence ends with a close-up of his snow-covered hand, his fingers loosening their useless hold, and the frayed end telling again the grim story. Dramatic emphasis in this superb sequence is increased by the jerky movements of Krafft's head in his three close-ups (director's control); and the three short shots of the crashing ice have far more power in their speeded-up tempo than would one shot alone—a fairly common montage effect used by all good editors, particularly the Russians. In only the last of the three shots of the girl's fall is a dummy used; the others were shot at half speed, the girl being carefully lowered as required.

(Continued on next page)

Your enjoyment of the easily available popular film classics will be greatly increased by an understanding of their history, technique and the production methods involved. We plan to present to you each month a full analytical commentary of a well-known film and shall deal with classics in all three gauges: 8mm., 9.5mm. and 16mm. The articles will give information on the length issued and length available in sub-standard versions, particulars of

technicians and players, story, theme and production, direction and design, acting, photography, and montage. We believe that this is the first time such comprehensive commentaries have been published. Great pains have been taken to ensure that all the information given is entirely accurate—and in this the articles may be regarded as unique, for the number of errors repeated in book after book is surprisingly large. Next month: "Metropolis."

Krafft associates the disaster with the dripping of water in the thaw ; he leaves the cabin to smash the dripping icicle . . .

The husband returns with Christian, a natural type embellished by the directors with a studied match-striking characteristic. He strikes one (on the table top) out of the frame area to light the cabin lamp (while outside Krafft turns up his collar—thus expertly is the chill of evening portrayed) ; and later he strikes another, but only at the second rub ! He leaves the cabin, meets Krafft ; cut to a beautifully composed shot of moving cloud-banks in the darkening sky, and a comment on dangerous weather approaching.

Majestic Shots

At dawn Krafft sets out to climb the North Wall, and the husband goes with him. Maria sees them go, and follows. Insets of log-book entries explain the action and enable it to be conveyed with an economy of shots. The directors continually insert character touches ; the extended log-book entries ; Maria obviously awake all the time ; Krafft's reference to the students as "Young fools" when they are seen already to have started their climb ! Maria skis up and asks Krafft (not her husband) if she may come. At last he agrees.

The climb, first by ski, then ice-boots and axes, is rendered now in majestic long shot, now in crisp close-up, the final phase being up a sheer wall of glittering ice. They gain a wide ledge and pause, but ominously the slides start, so they must push on. The husband now feels the urge to assert himself and insists on leading : this is superbly handled by Pabst . . .

(pan) C-M.S. his feet pass Krafft's.

C.S. Krafft puts a restraining hand on his arm.

C-M.S. Krafft slowly shakes his head.

TITLE. "It's madness—you will kill us all."

M.S. (of husband, with Krafft's back near camera)



A scene of sharp contrasts such as this needs an accent to assist the cohesion of its various elements. This is supplied by the patch of shadow at the base and the strip of wall on the right. Cover them up, and the scene appears harsh and "bitty."

Krafft makes strong gesture of protest—
C.S. husband obstinately disregards protest—
C-M.S. Krafft repeats warning, but Maria asks . . .
C.S. . . . asks, so he gives in—
L.S. the husband proceeds . . .

The shot immediately succeeding the title is a masterpiece of concise expression.

The ice slides ominously continue and Krafft shouts (with reason plus very human irritation) "Hurry, hurry." The repetition of the word is admirable, another instance of titling skill. The slides get worse, and as was inevitable, the man is dashed down the mountain

COMMENTARY

side. Only Krafft's strength, vividly expressed by a perfectly chosen low angle shot, saves him. He hangs limp from the rope, against the sheer ice.

The students see the accident, and set off in their attempt to help. Meanwhile Krafft reaches and rescues the husband. The students are swept away by a huge fall. These scenes are done in remote detachment, the students mere specks on Palu's vast whiteness. Krafft regains the ledge at the expense of a damaged leg : a sinister shot of drifting cloud-shadow in a remote valley is contrasted with the three trapped climbers.

In close-up, Krafft shouts a loud "haloo-oo" in the hope of attracting attention : in remote, grey long shot the cold, distant peaks and valleys idly echo back the cry. He shouts again : cut again to slow pan of deserted surrounding peaks. In a valley Christian skis home . . . at last he pauses . . . he has heard. He hurries away, and we notice how the mists are rolling down into the valleys. Icy wind stirs the trapped climbers on their high ledge. Krafft gives up his woollen helmet to the husband.

Naturalistic Portraits

Christian goes from window to window in the village with the call, "Trouble on the Palu." Naturalistic portraits are given in close-ups of the villagers as they open their frosted windows to respond. The bells are rung. Women and aged folk bid God-speed to the searchers, who move off with flaming torches in the black night. The directors have here magnificently employed natural types, and the cameras record light and shade in sweeps of rare beauty.

On and on, up the mountain. Icy vapour rolls down the North Wall . . . a red-filter "night" shot of astonishing dramatic power. Krafft swings a lamp . . . the cold is intense. The husband's injury begins to tell. Krafft has to give up his coat. Maria tries to refuse. The searchers proceed down into the chasms of ice, where unique photographic effects result.

It might be thought that here were opportunities that could not be fluffed, but it should be noted that these chasm shots are most carefully arranged, and the grouping of the searchers is beyond criticism. The finding of the students' bodies is darkly shown, and there is one grim shot of a body, hung shapelessly, being hauled up into a dome of ice.

On the ledge the husband cracks up, pushes aside his wife, attacks Krafft. These shots are lit solely by just enough back light to show up the outlines of the players. Maria is shown in one memorable close-up when a single tear finds its way down her cheek. Then her hand picks up the rope, and she helps to tie up her husband, to preserve him in safety.

Sharp and Soft Focus

Dawn comes. A shaft of sunlight slants across the valley. (This has very effectively been double-exposed on to the L.S.). In full close-up, the sun spreads across Krafft's face (very effective : done by sliding away large screen during the shot). The sun's low beams are shown in a distant shot of long shadows. Udet sets out, and his plane combs the icy wastes : he locates them and drops a note which is recovered by Christian. He tries to drop food, but his parachutes miss ; in sharp-focus close-up Maria watches the parachutes ; in soft focus, she realizes they have missed.

The searchers are spurred on and, in more of Dr. Arnold Fanck's well-chosen sweeping movements, they return to the fight against the mountain. Again bitter cold descends. The bound man freezes. Krafft gives up his jacket. Then he stands shaking with cold in a sequence of rare perfection of acting, direction and cutting :

C.S. (head only) he shakes with cold : his teeth chatter.

C.S. (shoulder to waist) he slowly beats his arms—

L.S. he stands with his arms still, the wind flaps his shirt.

M.S. (gauze diffused) as last shot. He looks upwards . . .

L.S. Mist rolls down the North Wall . . .

M.S. he painfully gets out a book . . .

The last two shots explain his idea to walk into the depths of Palu, to rejoin his wife. The searchers get near. In the village prayers are offered in the church. Then the shout, "They are coming ! They are coming !" (Another title given emphasis by repetition of the wording). In a sparkling curve, the searchers ski back with news of the rescue. At the cabin, the young couple are rubbed with snow. Maria asks "And—Dr. Johannes ?" Christian hands her the book with its last message, "Dear old Christian . . . don't try to find me, save the others. I have gone to her."

ON A CLASSIC

Silent film art, as exemplified in many sequences of *The White Hell of Pitz Palu* can be of great beauty and appeal ; and the writer sincerely hopes the foregoing survey will give pointers to an additional enjoyment and appreciation of the film. Furthermore, by such analysis one is enabled to better one's own film technique, by profiting from methods which can be seen to have been successful. In conclusion, a very brief summary of the production phases will help to clarify the essential co-operation that leads to success :

Direction

It will have been noted that Pabst with his intimate touches, skilled grouping, and picking out of the key details of each sequence presented clear characters and a pure and straightforward narrative. Fanck, experienced in the mountain settings, enabled Palu to be shown as an almost alive being.

Acting

This, with a mixture of film players and natural types, succeeds particularly on account of sensitive direction. No false note occurs throughout. This is assisted, of course, by the players being, largely, unknown to English audiences. Laughton could act Krafft ; Diessl was Krafft.

Photography

Three cameramen were responsible, none of them specially famous ; and, in fact, there is definite unevenness in composition. There is, however, great technical competence ; snow scenes are particularly difficult to render uniformly and with good contrast. In particular they are to be congratulated on achieving both the Fanck mountain vastness and the Pabst complex intimacy without loss of reasonable style, and without falling into the temptation of giving a display of technical cleverness.

Design

This is comparatively a small item, being confined to the cabin interior arrangements, and details in the village. The impeccable realism is the best tribute to Erno Metzner. Possibly also he assisted in grouping and arrangement in the chasm scenes, such is their compositional purity.

Montage

Pabst's famous cutting-on-action (so that an action is continued through the cut, thus masking it) is less in evidence here than in his earlier films, partly due to the lack of many intimate scenes. In the abridged version, of course, it has been in many cases upset by the removal or pruning of shots. The film is in general notable for concise rather than spectacular cutting, examples of concise excellence being observed in the quoted extracts from the scenario and also such sequences as Krafft's shouts for assistance and the struggle on the ledge.



Yes, it gives rise to a chuckle. But it would be funnier still on film. Shots of animals can often be used to point a contrast (not always polite!) with human beings.

There are memorable moments in *Pitz Palu*. Time does not wipe from one's mind the image of Krafft's frantic shout to his wife ; the line of students hurled down the chasm ; the dancing light of the torches ; the chill mist rolling down from the North Wall ; the aeroplane over the mountains ; and Krafft in his last moments of unbearable cold ; and the hazy softness of Maria, recovering.

Such are flashes of memory from an epic.

The 16mm. prints are identical with the version shown in the cinemas except for the specially arranged musical score, and the fact that the torchlight scenes were tinted red and toned blue—a questionable improvement. The film will stand on its own rather than suffer casual accompaniment ; but for those who are able to call in the assistance of musical colleagues to arrange a big show, the suggestion is offered that excerpts from Symphonies Nos. 1 and 5, "En Saga," and "Tempest," by Sibelius, will be found appropriate, together with the H.M.V. aeroplane effects record.

Outside Shows *Some Notes on Electrical Equipment*

During last winter (writes a reader) I gave a number of cine shows to various civil defence units, and in a number of cases was far from sure as to the safety or otherwise of taking the supply for my projector from various electrical points, such as lamp holders, three-pin sockets, etc. The number of different types and sizes of sockets met with is also confusing, and in some cases the people in authority seem a little anxious about my connecting up my machine. I am told by the makers of my projector that its total consumption is 700 watts. Can you explain this in terms of volts, amps, etc. ?

Our Enquiry Bureau replies : Your difficulty in regard to plug-and-socket sizes is not, unfortunately, capable of any simple solution, since these are far from standard yet, although much has been done already to simplify the different patterns.

We suggest that you carry with you the following plugs, which are the commonest now in use, but any others which you can

add to your collection from time to time will be helpful in dealing with difficult cases. An ordinary bayonet-adaptor, a 2-pin 5-amp plug, a 3-pin 5-amp plug, a 2-pin 10-amp plug (becoming obsolete), a 3-pin 15-amp plug, and if obtainable, a 2-pin adjustable plug which is usually fitted with a standard type lamp-holder fitting on the top of it. You should also carry a card of fuse-wire with 5, 10 and 15 ampere fuse-wire on it, together with a small pair of pliers and one or two different sized screw-drivers.

This equipment should enable you to deal with practically all of the cases which you may meet in your travels. The practice of just pushing bared wires into the holes of any outlet-point or socket cannot be too strongly discouraged.

The wattage of any piece of apparatus is obtained by multiplying the voltage at which it is worked by the current taken in amperes, so that if you are using your projector on the standard 230 volt 50-cycle mains supply,

it will take 700 watts divided by 230 volts, i.e., about 3-amperes. Theoretically, you should be able to use 5-amp fuse wire in the projector circuit, but you will probably find that, when starting up, the projector will momentarily take a much bigger current than this, and it will be necessary to use 10-amp fuse-wire to get over the difficulty. However, never use heavier wire than you need.

If a fuse "blows" do not be alarmed, and point out to any one who may see or hear it that a fuse is simply a safety-valve in the electrical circuit, and that while it is functioning there is the minimum risk of danger.

One other suggestion—if your equipment, i.e., the projector and resistance, is not already fitted with rubber-covered cab-type type cable, change over your present flexible wires to this type of cable, as it is much more durable. Again, if you find it advisable to increase the length of cable supplied with the equipment, increase also the number of wires in it, so that the additional length offers no greater resistance than the shorter length of thinner wire.

F.A.P. Gets to Work

ARE WE PREPARED? By Dr. A. Sheard. Kodachrome 16mm. 2 reels.

Some time ago we acted as judge for a film competition promoted by "The Caravan" magazine, and had no difficulty at all in deciding on the prize-winner. It towered above the rest of the entry, not merely because the also-rans exhibited common beginner's faults (for there was some quite good work among them) but also because it was a first-rate production that would have attracted attention in any company.

It was called "Cornish Caravan Cruise" and owed much of its success to the fact that the author, Dr. A. Sheard, had succeeded in establishing the character of the holiday-makers—his three sons and Mrs. Sheard—so that one got to know them and felt that one had been elected an honorary member of the family, *pro tem*. Every shot contributed directly to the theme and many of the scenic shots—it was a colour film—were beautifully composed.

Good Credit Titles

So that when Dr. Sheard's film, "Are We Prepared?" came to us for criticism we composed ourself comfortably and were prepared to forget that there was a raid on at the time. The film begins well. The credits are imaginatively done, as witness "Direction by the Spirit of Vigilance." (We recall that "Cornish Caravan Cruise" showed a nice touch in titling. The boys were starred in the credits—supported with excellent close shots of them—with "Pater and mater in minor supporting roles.")

In the credits of the present film, however, the word "cast" is given an ultimate 'e' that changes its meaning. Quite a number of amateurs, it might be noted, mix up 'cast' and 'caste.' You will hit on the right derivation if you remember that when you choose your players you *cast* them for their roles.

The opening scene is a medium long shot: the corner of a street, a poster on one of the walls (but we cannot quite see what it is) and a man walking by. He pauses and looks up at the sky. Cut to closer shot of him by the poster, which is now seen to read: "Freedom is in peril. Defend it with all your might." This is a compelling setting and situation, making an arresting opening. But the next shot, of planes in the sky, is rather a dubious one. It looks faked and the close examination that its rather inordinate length permits us to give it, confirmed one's first impression. This shot should be drastically cut, so that it is little more than a flash.

Quicker Cutting Needed

The alarm is sounded. We see that part of the upper storey of a house is on fire. The A.F.S. arrive and put it out. It is this sequence that first gave us an inkling that the hand that made the caravan film might have faltered. More variety of angle is needed and quicker cutting, for this film is not intended to show the work of the A.F.S. Had it been designed as an instructional film

Amateur films of any size, subject and gauge may be sent for review. Those that reach a reasonable standard of merit are awarded a Leader. A special animated Leader is given for films that are particularly noteworthy. Please do not send us your film until we ask you to, but first advise us that you have a film you wish reviewed, stating its length and gauge. We will then reserve a date for screening it and inform you accordingly. Please do not forget to enclose the cost of return postage with your film. Address: The Editor, "Amateur Cine World," 300/304, Gray's Inn Road, London, W.C.1.

By THE EDITOR

for prospective Auxiliary firemen, one would have expected that the need for showing the activities with clarity and in detail would have over-ridden the producer's desire to create excitement by progressively shortened shots and quick changes of angle. But only an impression was needed, for a commentary sent with the film explains that it 'is an effort to show something of the activities associated with first aid posts in this district.'

Spoken Titles

It is assumed that high explosive bombs have caused destruction in a congested part of the city and that there are casualties. The first aid parties set out. Doctors and nursing staff hold themselves in readiness. Then comes a sub-title: "Drs.: 'Any casualties?' Charge Officer: 'Not yet, sir!'" This is all one sub-title—not two, and why the interpolation of the identities of the speakers? The treatment is reminiscent of the caption to a cartoon. The artist cannot always easily show in one drawing alone who is speaking, but it is a simple matter for the film maker to do so by taking a close-up of the speaker, cutting off two-thirds to a quarter of it, inserting the spoken sub-title and following with the remainder of the close shot. There are, of course, many variations of the method, and sometimes the close-up is not cut in two (indeed, it is not always necessary to have a close-up at all) but this is the orthodox—and easiest—way of avoiding any confusion of identities.

Another sub-title begins: "Dr. B. to Dr. S.: 'I'll stay right here.'" If we had been shown close shots earlier on of Dr. B., Dr. S., the charge officer and other leading

□ ~~~~~ □

LUMINOUS SWITCHES

LUMINOUS paint is a fairly cheap commodity, and so long as one remembers its inherent requirement of needing "charging" (by exposure to bright light as often as possible) it remains fairly efficient, and a definite assistance in the matter of indicating where things are, in the dark. It is admittedly a little exaggerated to apply the stuff to projector controls, because one should get to know one's machine well enough to be able to operate it by feel; but it is of considerable value to indicate switch positions: both in the case of wall switches, where it may be painted on a ring set up round the switch casing, and on pear switches in projector leads. Switches in leads suffer from the grave disadvantage that they have "no fixed position in space," but they are often indispensable, especially when giving shows away from home; and it is under just these conditions that a spot of luminosity helps.

□ ~~~~~ □

officials, there would have been no need to remind us constantly of who is who. But even when there can be no misunderstanding, the author insists that there shall be no possibility of error, as, for example, in the sub-title: "Dr. S.: 'The prompt application of that tourniquet has saved his life.'"; but in the preceding shot there is only one doctor, and he is talking to a nurse.

The first aid men reach one of the casualties. He is pinned by a heavy beam, and his arm has been severed. It looks horrible, but one knows that the casualty has been 'made up' for the part. The stump of arm is suggested by what appears to be a lump of raw meat. So that while one is shocked—remember, the film is in colour—one is also amused by the author's rather horrid ingenuity, and much of the effect he hoped to gain is lost, for laughter drives out most emotions. That severed arm is flourished at us, held on unnecessarily.

Realism

The author says, in his written commentary, that he felt it necessary to show the more serious casualties in 'a very realistic fashion—in order to demonstrate the speed and efficiency with which we are able to deal with major casualties,' but we scarcely feel that this reasoning will bear examination. After all, the competence of the personnel can be conveyed just as effectively without the brandishing of faked injuries and, indeed, suggestion—playing on the audience's feelings—can be more harrowing than a sight of the real thing, just as a shadow can be much more intimidating than the innocent object which casts it.

There are two reasons why this objective treatment is wrong. One is that the film is not intended as a medical document for the instruction of first-aid parties. It is designed, we take it, to encourage the local citizens and to show them that, in the melancholy event of their being knocked for six, they will be well looked after. They should be reassured, therefore, not intimidated.

The other objection is that, despite the opening shots, it becomes increasingly obvious that we are not seeing the real thing, but a practice exercise. But in these days we sup with horrors, and make-believe seems a little lame. And since we *know* it is make-believe, there is little point in striving after circumstantial realism, for we are still unconvinced.

And now let us have done with this topic. We apologise for dealing with it at this length, but many amateurs are making films of this type nowadays, and a little homily on suiting the treatment to the audience may be of some help to them.

The second reel of "Are We Prepared?"

begins with a shot of nurses sitting down, waiting for the casualties to be brought in. They sit about with the philosophic detachment of yogi, as if impersonal reflection was the only thing that mattered. Now we know that nurses must necessarily be of a phlegmatic disposition, but for the purposes of the film we should have liked them to have displayed a little more awareness. One has the feeling that they don't quite know what to do with themselves because the cameraman has given them inadequate direction. It would be advisable to cut the first part of the shot.

The walking wounded arrive and are attended to, and treatment given for shock. Two nice little human touches are introduced, but unfortunately they do not quite get over—chiefly because of over-acting. A small girl presents her doll for patching up by one of the doctors, but she is obviously weeping to order. Better not to have had her cry at all. An old gentleman comes in, shaking and quivering as if in the throes of a virulent palsy. "Where are you hurt, grandad?" asks the doctor. "Nowhere," he replies, "but that durned bomb blew my false teeth away." One feels that they must have been shaken out. The idea is a good one, and it is a pity to have spoiled it by having the 'patient' suggest the extremities of incapacitating old age. How much more effective it would have been to have presented him as a stoic old fellow, his calm dignity only ruffled by indignation at losing his teeth.

Dangers of Over-Acting

A gas alarm is sounded. Near-panic among the casualties. One of the ladies suddenly rises, and without any warning, drops to the floor in a dead faint. We were irresistibly reminded of some lines in "The Drunkard," a parody on Tennyson's "The Eagle": "He clutches at the reeling walls, and like a lump of lead he falls." The effect is, unfortunately, comic.

When people face the cine camera for the first time, they are invariably paralysed or else over-act. Don't give them any opportunity for barn-storming! Don't let them act at all if they have no gift for it and their part in the film is small. They can preserve a quite wooden face and, provided the shots of them are inserted in the right context, their woodenness can actually be interpreted as emotion. The history of the cinema abounds in stories of skilful editors who have made impressive actresses out of people with negligible histrionic talent.

The casualties are reassured, being told that the room is fully gas-proof. Then follows what to many will be the most interesting part of the film: a section which in itself is a very good reason why we should be told at the outset that we are assisting at an exercise. This section deals with the reception and treatment of gas cases; it is interesting because it shows incidents that we have not experienced—and, it is to be hoped, never will. The patients arrive and are stripped, liquid gas is removed from the eye of one sufferer, salves are applied, bodies thoroughly cleansed under showers, and so on.

Then the all-clear is sounded, the patients are evacuated to hospital or home, and the doctors meet and discuss the day's activities. The film was, of course, well worth making and, while it suffers here and there from inadequate treatment, much can be done to tighten it up by trimming many of the shots, so that the film moves more swiftly.

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A SIMPLE PROSCENIUM

Q. With a little time to spare during the black-out, I would like to make a proscenium in order to give a better effect to the room which I use as a home cinema. Any hints which you could give me would be appreciated.

A. We think that your simplest plan would be to make up a shallow box at the back of which you could fit your present screen. If the sides of the box are made about 6 ins. deep you can fit a row of small lights, either at both sides and/or the bottom, using ordinary batten-holders fixed directly on to the wooden frame. The "front" of the proscenium should be wide enough to cover the lamps which will be projecting in towards the centre of the screen.

These lamps need only be of low power, say, 25 watts each, and if they are arranged in pairs or groups of colours, special effects can be obtained, either by simply switching the different colours on or off, or, with the aid of dimmers, mixing them one into the other.

If dimmers are selected for this purpose, three groups of lamps will give a complete range of colours; these groups are red, blue and green, which, strange though it may seem at first sight, when all on together will give white lighting on the screen.

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A simple pair of light curtains can be run on standard track fixed behind the top front board of the box. If the completed box-form proscenium can be arranged to be hung in one position on the wall, then cords can be taken through screw-eyes fixed on to the picture-rail of the room, so that the curtains can be pulled open and shut from a position near the projector.

MAKE-UP

Q. We are hoping to make a simple film production with two or three actors, and would like to know whether it is difficult to use proper make-up so as to get a better effect on the screen.

A. It is not so very difficult to use make-up for film work. One of the professional make-up supply houses, such as Max Factor Ltd., of 16, Old Bond Street, London, W.1. will supply you with very complete information on their products and their correct use. We suggest that you use panchromatic film for your production, and

that when writing to Max Factor you mention the fact, when they will send you data on make-up specially produced for this stock.

If you are using three characters who do not differ much in age, select make-up which will accentuate any artificial difference in the general tone of their complexions. We strongly advise against attempting in a first film to play character parts calling for big differences in age representation, as make-up plays only a small part in the characterisation; gesture and bearing are usually far more important than false whiskers.

FILM SPEEDS

As 'DIN' and 'Scheiner' methods examine a different aspect of exposure than that which is examined by H & D methods, there is no directly relative comparison to be made between them, and such 'conversion tables' as exist can at best be only compromises. Furthermore, the methods of conversion between Scheiner and DIN, while they are directly comparative, conform to two different systems in America and in Europe.

Again, the same material can have a number of different Scheiner numbers according to whether its exposure is to be determined by visual or photo-electric meters, and these again differ with various makes of meter. It is thus safest to accept the rating issued by the maker of the particular meter which you use, and adhere to this without question.

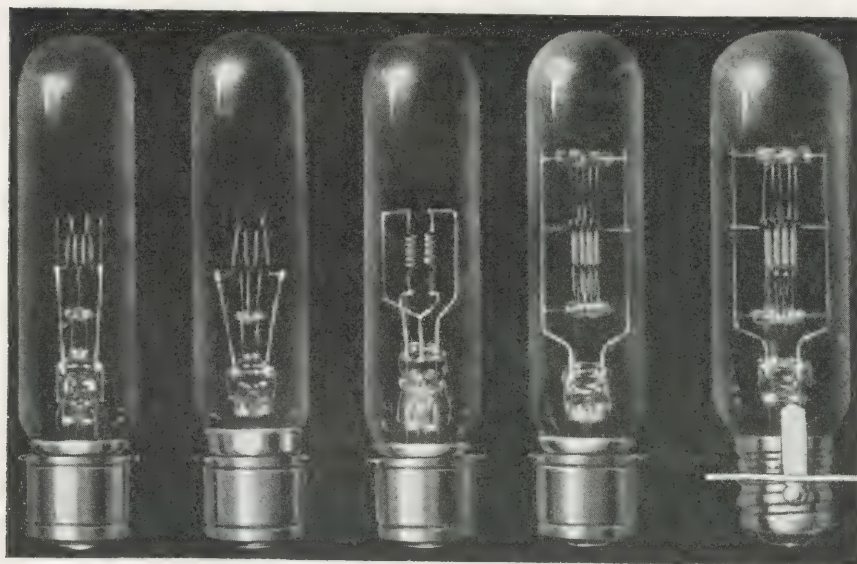
The reason for the unreliability of speed notation systems, particularly H & D, is that they do not take account of all the characteristics and intended uses of the various materials, while individual manufacturers all use their own interpretations of the methods involved in arriving at speed figures.

There is a comprehensive survey of cine material classified into speed groups, with approximately corresponding H & D, Scheiner and DIN ratings in "The Amateur Cinematographers' Diary, 1941."

TITLING

We would not advise making titles on ordinary reversal film and developing it as a negative. Try ordinary positive stock, which is both cheaper than reversal film material and more suitable for the job. Short lengths can be developed in the ordinary dark-room light, such as is suitable for bromide paper, using either the developer recommended for the material, or a fairly contrasty positive type developer. Titles may be made by photographing black letters on a white ground, and using the negative obtained as a 'direct positive.'

For splicing into a neg.-pos. film, however, the film must be loaded into the camera with the emulsion side of it away from the lens. On the other hand, the positive stock, used as a negative and developed as such can be sent to any processing station handling neg.-pos. work and printed. The positive print can then be spliced into your neg.-pos. film. It is essential to remember that all the film in a reel should have the emulsion lying the same way, i.e., either facing away from the lens or towards it.



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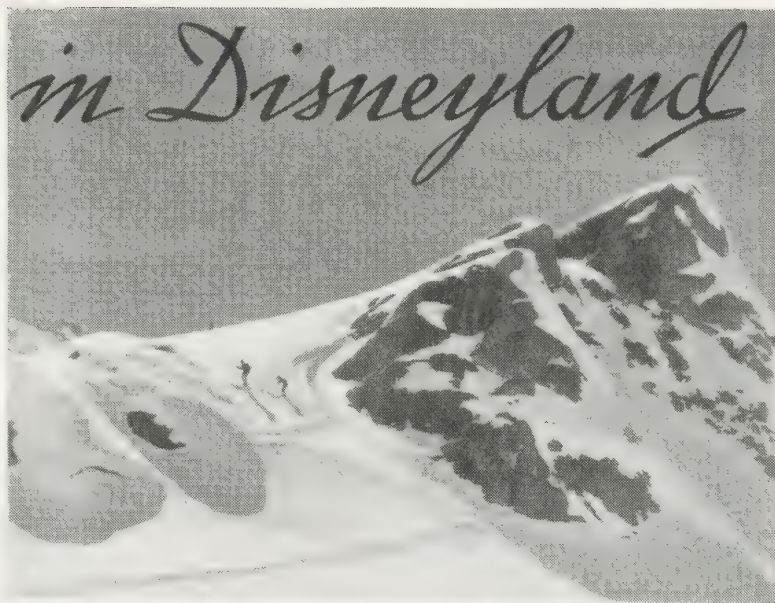
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Alice in Disneyland

Human Figures in Cartoons ∴ Fine
Snow Scenes in "The Mortal Storm"
The Hitchcock Touch ∴ Screen
Biography

By B. G. D. SALT



An exquisite snow scene, with human figures in the far distance, from "The Mortal Storm," discussed in this article.

IN spite of Hitler's air blitzkrieg, which has held up the London general release of many important pictures (notably "Convoy") Disney's "Pinocchio" was generally released to schedule. This picture has already been reviewed in *Amateur Cine World*, but its release gives us an opportunity to speculate on Disney's future, and glance at his past. Advance publicity informs us that his next feature picture, now nearing completion, contains human actors, notably Robert Benchley of the "How to . . ." fame, as well as cartoon figures. One of the reasons is, no doubt, that it has not yet been found possible to portray straight human characters satisfactorily in cartoon—they have to be caricatured to be successful. Probably "Pinocchio" more nearly achieved success in this respect than any other cartoon, but even here Gepetto was somewhat of a caricature, while the Blue Fairy, like Snow White, was frankly greatly disappointing. Gulliver, in Fleischer's cartoon, was partially successful, being traced from shots of a real actor; but he turned out to be rather a nondescript personage. So Disney is now to try and eliminate the difficulty by introducing real actors.

Not Such a New Idea

This, however, is not quite such a new idea as some people suppose. Disney himself used it, many years ago, in his now almost forgotten "Alice" series—a series of silent cartoons made long before Mickey Mouse made his bow. A few of them can still be obtained in 16mm. libraries. In these cartoons Alice was played by a real girl, but the rest of the characters, including a cat much resembling our old friend Felix, and all the settings were cartoon. The public as a whole did not take kindly to this mixed grill, and the series was not a great success. The opposite idea—that of cartoon figures in a natural background—was tried with far greater success by Fleischer. His "Out of the Inkwell" series still rank, in the opinion of the writer, among the most brilliant cartoons ever made.



"The Mortal Storm": studio snow scene with photographic backing. Compare with genuine snow scene above.

But the position to-day is rather different. Alice was a frankly naturalistic figure in an obviously drawn background. (The trick was carried out by cutting out hundreds of photographs of Alice, enlarged from a film strip, and pasting them in position on the drawings). But the modern Disney cartoon is not an obvious drawing. The whole trend of modern cartooning has been away from the use of drawings as drawings (which reached its highest peak in the Inkwell series) and towards naturalism. Disney's drawings are only a means of producing a slightly fantastic, but nevertheless apparently real world. Once on the screen they don't remain as drawings.

Hence it is possible that Disney's new experiment with real actors may be a success. There will no longer be such a violent clash of ideas as in the Alice films. Fleischer avoided this clash in his Inkwell series, because in those films the drawings were treated as drawings (they could be rubbed out and added to, etc.) and the naturalistic parts were treated as the real world; but with Alice there was an uncomfortable feeling of being in two worlds at once!

Effective Propaganda Films

America, as well as providing us with much in the way of armaments, is certainly sending us very good effective propaganda films. Warners started the ball rolling some time ago with "Confessions of a Nazi Spy," and now M-G-M have worthily followed their lead with an adaption of Phyllis Bottome's novel "The Mortal Storm." It is a fine film, beautifully made. The photography in particular is first-class, and some of the mountain snow scenes towards the end—one is illustrated above—are among the finest snow photography the writer has ever seen. There are shots of vast expanses of snow, with human figures mere dots in the distance, and yet the eye is drawn to them immediately, and the meaning of the shots is at once apparent.

This use of extreme long shot is worth a little closer attention. How is it that on some occasions in such shots the eye jumps at once to the important figures in the picture, however minute they may be, whereas at other times the picture just becomes a meaningless landscape? In "The Mortal Storm" matters were helped by the fact that the figures appeared black against the dazzling white snow, but there were similar shots of a coach in the extreme distance in "Stagecoach" which were equally successful.

The answer is *movement*. When such a shot is successful, it will be noticed that everything in the picture is perfectly stationary except just that which the director wishes the audience to see—the figures on skis in "The Mortal Storm" and the coach in "Stagecoach." The eye at once fastens on any movement. A bird or animal, by reason of its natural camouflage, may remain quite invisible among the grass or trees. But once it starts to move it can be seen immediately. A tree moving slightly in the wind in the foreground

(Continued on next page)

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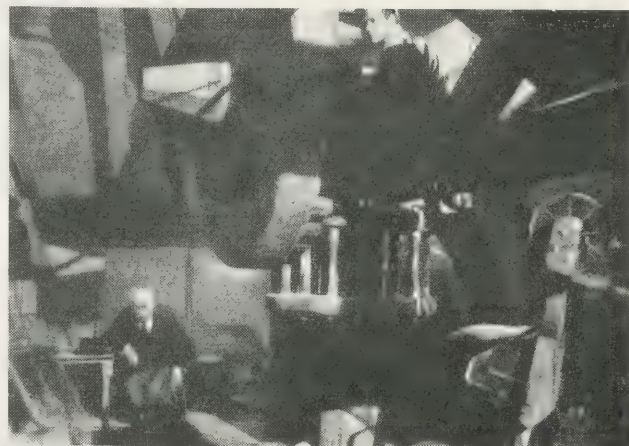
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Alice in Disneyland

(Continued from previous page)

of either of the shots mentioned above would be quite sufficient to destroy the effect.

An unpretentious little picture has recently been shown by Paramount; it has the dreadful title of "God Gave Him a Dog." Forget the title and forgive a certain amount of inevitable sentiment, and you will find it a picture full of quite unusual freshness. Made almost entirely in the open air, it deals with the breeding and training of pointers, culminating with the annual trials of these dogs. In many ways it resembles the English-made film of a year or two ago about sheep dog trials—"Owd Bob"—and has the same simplicity of approach.



Joel McCrea and Albert Basserman in a striking scene from "Foreign Correspondent," reviewed below.

The German night raiders managed to achieve a good bit of synchronising with Hitchcock's second American film, "Foreign Correspondent" (United Artists) when I saw it recently. While an airliner was being blown to bits on the screen by shell fire, bombs were being dropped outside the cinema, which greatly added to the effect, and produced results unobtainable with the finest modern recording! The film shows us Hitchcock back to his brilliant formula of spies and crime organisations, after his effective new departure in "Rebecca." While perhaps not quite so memorable as the latter picture, it is still Hitchcock at his best, and is beautifully photographed by Rudolf Mate, who will always be remembered for the still unequalled photography of "La Passion de Jeanne D'Arc."

Clever Technical Trick

The film is full of Hitchcock touches. Perhaps one of the best occurs immediately after the assassination of a European diplomat. It is a pouring wet day, and viewed from above, the street and the crowd appear merely as a sea of umbrellas. As the assassin escapes, pushing his way through the crowd, all we see is a sudden disturbance of the umbrellas. Hitchcock is always at his best with ultra rapid transitions from humour to drama and vice versa. A typical example occurs when Joel McCrea is escaping along the parapet of a hotel roof. He nearly slips off and for a moment we are in suspense. Then he grabs at the neon sign—which smashes and most appropriately turns "Hotel Europe" into "Hot Europe."

There is a very clever technical trick towards the end of the picture. We see an undeniable model shot of a flying boat in flight against a sky backing. The camera tracks right up to a window and through it to show an interior with real people. If you watch very closely you will notice that when the camera is first close enough to see through the window, clouds are seen, as if we were looking right through the 'plane and through the window on the opposite side. But shortly after that there is a mix to the interior scene. It is likely that the model was large, and contained a small back-projection screen inside it. On this screen was projected first a shot of clouds,

which later mixed to the interior. The picture on this screen would be projected through a slot in the sky backing—a slot hidden by the body of the aeroplane. As soon as the interior was established there was a cut to another angle, so as to avoid the necessity of showing for too long a difficult process shot with its attendant shortcomings.

A remarkable coloured travelogue was shown in the same programme—"Jungle," one of the World Window series. These are certainly the most efficiently produced travel pictures ever made, for they abound in effects that one is apt to associate only with studio productions. We have seen previously in these pictures perfectly smooth tracking shots through Pompeii and an Arabian market, but in this film we not only have a tracking shot, but something very like a crane shot—in the heart of an Indian jungle. To make such shots it is essential to carry on location heavy camera dollies and rails on which they can run, and much other heavy and bulky apparatus. One can understand this being done for a big feature picture such as "Northwest Passage," but that such expense should be incurred for a one-reel short is, to say the least of it, courageous!

"Young Tom Edison" and "Edison The Man," apart from being excellent films, are interesting in that they form between them the first two-part screen biography yet made. Each is a complete film in itself, but the former also acts as a sort of prelude to the more serious business of "Edison The Man."

Care Over Details

Extreme care was taken by the M-G-M studios to ensure the authenticity of every scene and set. William A. Simonds, an authority and author of books on Thomas A. Edison, was technical adviser for both films. Under the impression that technical advisers were necessary nuisances in film studios, he accepted the job, expecting to have a nice quiet holiday in pleasant surroundings. Instead he found that the studios demanded such accuracy of detail that he was kept busy night and day. Edison's laboratory was reconstructed, accurate in every detail, and numerous working models of his various inventions were made.

"20 Mule Team" is notable chiefly for its exterior photography. It is a story built round the 20-mule teams that hauled loads of borax for days on end through Death Valley sixty years ago. Although the story as such is largely a starring vehicle for Wallace Beery (for the first time his nephew, Noah Beery, plays in the same film with him) the film has succeeded in capturing the atmosphere of heat, desolation and death in those terrible desert wastes. Much of it was actually shot in Death Valley, and one's sympathies go out to the artists and technicians who had to work there. The atmosphere conveyed by the rugged rocks and blazing white ground gets over more effectively than in any other desert film I can remember.

The present article is the last of the series, and with it I make my farewell—*au revoir*, rather—to *Amateur Cine World*. I hope, during the last few months, that I have made some friends among my readers—I am sure I have made some enemies! But to a critic both are welcome, and I hope to meet both again.

We are sorry to say goodbye to Mr. Salt, whose future activities will give him no opportunity for film reviewing. In his place we welcome Mr. E. H. Lindgren, Curator of the National Film Library, as a distinct acquisition to our pages. His first article will appear next month.

Submarine Cinematography (Cont. from page 240)

the minimum of reflection, and illuminate the object "O." The ray "B," striking at an angle, will be refracted along "B'." The limit is reached with a ray just clear of the surface "C."

In this position, nearly all the light is reflected at the surface and that portion which passes through receives the maximum possible refraction along "C'." This critical angle AOC' is equal to $48^{\circ}30'$. Thus, instead of our object receiving illumination from diffused light all round, as it would in the open, the illumination will be concentrated in a cone, over the object, subtending an angle of 97° . The object will also receive light diffused from surrounding objects, illuminated in their turn from above, but this light is of a much lower intensity. Thus, an under-water object receives a preponderance of "top-lighting."

Now imagine the camera placed below water and focussed on the



object "O," as in Fig. 2. We have a ray of light, originating from above and diffused from the object along the path "A," into the camera lens. Another ray, such as "B," will pass through the surface and be refracted along "B'." The limit will be reached at the critical angle when the ray "C" is refracted along surface "C'."

Rays beyond this angle will be totally reflected at the water surface, and one such as "D" will be reflected along "D'" into the camera lens. This will produce an image of the object in the apparent position "O'." This phenomenon of total reflection only occurs under water, when a ray passes, or, rather attempts to pass from a dense medium to one less dense, beyond the critical angle. The full explanation will be found in any physics textbook on light.

If we now imagine that we are lying on our backs at the bottom of a pond looking upwards, the picture we shall see is something like Fig. 3. In a circular area above us, we shall be able to see from horizon to horizon; the man with the fishing rod will appear to be leaning over the "hole," though we know quite well that he is standing well away on the bank; while beyond the limits of the magic circle, in the area of total reflection, we shall see the bottom of the pond, upside down, with the weeds apparently growing downwards.

The size of the apparent "hole" in the surface is determined by the fact that a diameter will subtend an angle of approximately 97° with our eyes. We cannot therefore expect to include the whole effect with a camera, as no cine lens has an angle of acceptance of 97° , but it does indicate something of the curious results we may expect to find if we tilt our camera above the horizontal.

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Letters to the Editor

STAGING A SEA-BATTLE—DIFFICULTY OF SUGGESTING WAVES—BEST AMATEUR FILMS SHOULD BE PRESERVED—HELPFUL HINTS IN CLUB MAGAZINES

MODEL SHOTS

Sir,—I was extremely interested to read the article "Air Raid," by Terence V. Strong in the November issue of "Amateur Cine." I was myself, before the War, attempting to make a similar film, but unfortunately, I have not the technical ability obviously possessed by your contributor, and came across many snags which I was unable to surmount.

The story was comparatively simple. Living in the North of Ireland I was anxious to portray (with a fairly long stretch of imagination) what might happen here. A German pocket battleship, coming round the north coast, releases an aircraft to create a slight diversion; this plane scores one or two hits before being shot down. The film was being taken in Kodachrome A and I was using some very excellent six foot-to-the-inch non-flying scale models, actually the Penguin Series, made by Lines Brothers. I had my aerodrome laid out in a spare room with imitation trees, hedges, gates, painted background and all the paraphernalia, and it looked very realistic.

Insurmountable Difficulty

My first difficulty, which proved unsurmountable, was to show the German battleship appearing in misty weather. I found that I could not fake anything to look like sea. Incidentally, this model was very much smaller in scale and even using the slow motion on my Paillard camera, I was unable to scale the waves down sufficiently in speed, nor make them small enough.

I should be appreciative of any hints that you could give me, as it is my intention, subject to permission of the Censor, to make a reproduction in black and white of the Battle of the River Plate to act as an introduction to the library film, "The Scuttling of the Graf Spee."

Explosions, gunfire, planes starting, crashing in flames, etc., etc., I had little difficulty in faking quite well, but for some considerable time I could not get

my models to "fly" across the aerodrome—which was spread out on the floor—at the right scale speed.

More by luck than anything else, I eventually evolved a system which did remarkably well. I had my wife stand on a swivel chair holding a stick, to which was suspended, on practically invisible wire, my aircraft, and had a second helper slowly revolve the chair. By this means I was able to control the flight and speed of the 'plane. I was tremendously heartened by Mr. Strong's article as he was permitted to make his film during wartime, so I see no reason why I should not continue with my small effort which gives me so much enjoyment.

Hollywood.

H. WARNOCK BINGHAM.

If the film is made for private use, our correspondent is quite free to film the scenes he describes. Admittedly they concern the war, but they are an interpretation based purely on imagination. Of course, should he, in the manipulation of the scenes, reveal any knowledge of military strategy, then the case would be altered, but this circumstance is so unlikely as to be dismissed.

He can film the models in his own home, but must not shoot any real object or person having any connection with the war. For instance, he may film a model aeroplane in his home, in the garden or out in a field somewhere, but it is absolutely forbidden to shoot a real 'plane. Our contributor, Mr. Strong, it might be noted, did not seek official sanction for his film, nor was it needed.

With regard to the sea shots, water is invariably a problem to all who attempt model work, whether professional or amateur. And unfortunately there is no satisfactory solution. From a scientific point of view (writes Mr. George Pellinore, author of the current series on "Special Effects") waves can be divided into a number of distinct types. Waves at

The Editor is always glad to hear from readers, but does not necessarily endorse the views expressed

sea are generally a mixture of a number of types. It is possible to make moving scale "models" of pure gravity waves, but of no others.

If you shoot at a speed which is the inverse square root of the scale of the model, this will give a correct picture of gravity waves. For example, if your model is to quarter scale, then by shooting at double speed (32 or 48 pictures per second), gravity waves will be reproduced as if they were full size.

But as mentioned above, waves at sea are not pure gravity waves, and therefore this method falls down. All liquids (with the exception of mercury), have a very narrow range of characteristic properties, and therefore it does not help to substitute some other liquid for water. There is no solution to this problem, and as far as we can see, never will be.

The only thing that can be done is to make the models as large as possible, and shoot in slow motion as if the waves were gravity waves. If the model is large enough, this will give satisfactory results for most purposes.

Professional Results

If you look at the model work in many films about the sea, you will notice that the water looks unreal, suggesting that the models have been built too small. Examples that occur to one are in "Fire Over England" and the new version of "The Sea Hawk." On the other hand, in the silent version of "The Sea Hawk" the models were large enough to carry someone to steer them, and in "Convoy," although nothing like so large, the models were big enough to give remarkably good results.

There is one other method which, while not giving perfect results, does help matters considerably if enough trouble is taken. This is to superimpose the model ships on a shot of real sea. The superimposition would have to be done either by Dunning or Travelling Matte.

In cases where the model is some way away, split screen can be used, splitting horizontally somewhere in front of the ship. The upper part of the screen, showing the model and more distant waves, will pass because of the distance. The foreground would be real sea.

A shot of this type occurs in "Men of the Lightship." This method, simpler than trying Dunning or Travelling Matte, would probably be satisfactory in the case of Mr. Bingham's film. The existence of mist (which could best be produced by slowly moving across the camera an air-brushed sheet of glass a foot or two from the lens during the shooting of both halves of the split screen) would eliminate further the possibility of detection of the fake.

To sum up: either a large model, at least three or four feet long, but preferably much larger, of the battleship must be built, and shot at the highest speed possible; or an attempt must be made to combine model and real shots.

In the latter case especially, Mr. Bingham must be prepared for a lot of trouble and several failures before he attains satisfactory results. Attention must be paid to matching the lighting of the model shot with that of the real scene, and to matching the movement and densities of the mist in the two halves of the picture. The safest procedure would be to shoot each half separately, and combine them in a printer. (A camera can be used for this purpose if no printer is available). Or why not secure library shots of a real battleship?

* * *

WHERE ARE THEY NOW?

Sir,—It was with the greatest interest that I read your editorial in the November issue of *Amateur Cine* World pleading for the unearthing and circulation of the "amateur films of yesteryear." That some exist no more is the implication when you write: "Whatever the critics may say, there are some extremely good amateur film plays in existence . . . or were. Where are they now?" You also mention the sad loss of the library of the Federation of Cinematograph Societies as the result of enemy action.

The National Film Library has, almost since its inception, been concerned with this business of preserving copies of outstanding amateur films along with other important film records, since the Library feels that a representative cross-section of amateur

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£5 2/6.—Cine Camera, 35mm., has one-turn movement, f/3 Anastigmat, 80ft. capacity, very efficient, but unusually small compact design.

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"Sleepless Nights" (7), "After Office Hours" (8), "Speed Brent Wins" (6), "Death Drives Through" (7), "What the Puppy Said" (4), "Sing as We Go" (8), "Gateway of the West" (2), "Ontario" (2), "Eriskany" (2), "Pied Piper's County" (2), "Mount Everest" (3), "The Royal Ducky" (2), "This Fishy Business" (2), "High Hazard" (2), "Queen Elizabeth" (2), "Lord Nelson" (2), "Father Thames" (2), "Land of the Cuckoo Clocks" (2), "Stand Up and Breathe" (2), "Red Sails" (2). There are hundreds of others.

ALL the above are offered at 20/- per Reel; number of reels is indicated after each subject.

IN addition, we have a large number of **BRAND NEW** 17.5mm. Talkie films, including Popeye and other Cartoons and single and two reel subjects. 40/- brings sample and big list, but lists only sent to actual purchasers; 17.5mm. films exchanged, charge 5/- per reel; this applies to all films offered above.

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production at any particular date would be of interest to future students of the cinema. Unfortunately, the funds of the National Film Library do not at the present time enable it to purchase copies of such films.

It is very possible, however, that an amateur cine society which has produced something which it feels to be of exceptional interest or merit would be prepared on that account to pay for the making of an additional print for preservation in the National Film Library or, where negative stock has been used, to present the negative original to the library.

It is true that amateur societies also must count every penny they spend but where a considerable amount of labour has been expended in a really worth while piece of work, it is possible that a society will find it is able to spend a little more in order to have that piece of work kept in permanence.

The Library would be prepared to accept copies of such films for permanent preservation provided they were adjudged to be of sufficient merit and in this the Library would be pleased to have the assistance of yourself, Sir, as arbitrator.

All the films in the Library, I should perhaps add, are kept in the country, as safe as we can contrive from the effects of enemy action. They are stored under conditions of optimum temperature and humidity, both of which are continuously checked by recording instruments. The films are also periodically examined and subjected to laboratory tests.

British Film Institute, ERNEST H. LINDGREN.
(Curator: National Film Library).
(Mr. Lindgren's letter is discussed on page 231).

CIRCULATION OF ORIGINALS

Sir,—Your article on the disappearance of amateur films of a few years back moves me to air a favourite grievance of mine. For the general film-hiring public, amateur productions are almost completely unobtainable. This is not surprising, as, so far, there has been no organisation for their distribution.

Certainly there was the Federation of Cinematograph Societies, but their library, I believe, was not a very large one, and was only available to a limited public; some of the societies also, hired their own films, but all these arrangements had the same defect as the scheme, suggested in your article, for the war-time distribution of early films: they depended almost entirely on the circulation of originals.

Apart from the fact that many individuals and societies might be unwilling to allow the originals of

valuable films to go out of their keeping, films so hired would not long survive the rough treatment that library films seem to be subjected to by inexperienced projectionists. When one considers that the amateur film world is the only source of new silent films, the prospect of film libraries supplying silent versions of professional sound films is a melancholy one.

My suggestion is that a library should be formed to which prints of all the best amateur films would be added as they appear; these prints could then be made available to anyone who wished to hire them and not restricted to members of the particular organisation which possessed them. Colour films would give very little difficulty, as monochrome prints would nearly always show the relative unimportance of colour—most prize-winning colour films of recent years would have been as good if photographed in monochrome.

If anyone suggests that amateur films are not good enough for a library of this sort, the obvious reply is that they are vastly better than much of the unimaginative professional material that makes up a large proportion of many libraries.

Our correspondent's proposal is met, to a certain extent, by Mr. Lindgren's suggestion, although he has in mind a commercial organisation. Colour film, incidentally, can now be copied. Messrs. Kodak kindly presented us with an excellent colour copy of "It Never Rains" (one of the 1939 "Ten Best"). The circulation of this film, and others, to amateur cine societies, was undertaken by the Federation, but now, alas! all the films in the Federation library have been destroyed. See also page 231.—EDITOR.

CLUB MAGAZINES

Sir,—Re Mr. M. R. Oswald's letter referring to club bulletins. I enclose a couple of the Apex issues. We have had to cancel our meetings but trust we shall be able to keep the club together through the medium of our magazine.

This bulletin is issued regularly once a month and has been in existence now for two years; it has also improved very much since our first issue. We wrote to numerous clubs asking them for a copy of their bulletin, if any, but received only one that appeared to be printed for the occasion.

The secret of a good magazine seems to be a matter of keen members and—most important—a

live editor. We are all very proud of our bulletin and should be most happy to send a copy to Mr. Oswald every month if he cares to let us have his address.

London, S.W.11.

REGINALD A. JONES.

"News-Reel," the Apex A.C.C. Bulletin, is one of the best written club magazines we have seen. It contains, on an average, eight 6½ in. x 8 in. pages. The October number was the twenty-fourth issue. The September number contains an article in a new series, "Looking Back" (in which members record their early experiences), an account of how a proscenium was made at a cost of three shillings to the club, and a report, by the author, on the production of his competition film.

This last is one of a series in which the makers of prize-winning films have described their methods. In the August issue Mr. P. F. Haywood wrote on how he made "These Amateurs," which has been reviewed in A.C.W. and awarded a Leader. His article contains a number of useful hints:

"I found that two 150 watt bulbs from Woolworths (before they went off the sixpenny standard) when fitted into Kodaflectors, have the same lighting capacity as one Photoflood in a similar reflector. This is based on the Smethurst readings and applies to pan film, as the light is somewhat yellow. These 6d. bulbs can be left burning continuously.

"I also found to my cost that if a camera is mounted on a high tripod and left running, it is liable to vibrate, giving the resultant picture a wobbly effect. But if the motor is slowed down to 12 f.p.s. (and the aperture reduced by half a stop) this does not take place. . . I should mention that the tripod I used was too light for the weight and size of the camera and was standing on a thick carpet. . .

"I played several parts myself with the aid of a bowden wire. There was no one to look through the viewfinder for me, so I marked out the limits of the picture by hanging lengths of white tape from the ceiling, about six inches clear of the edge of the picture area. Then when the camera was started I had just to keep clear of the tapes and I knew I was in the field of view."

The same issue also contains a brief sketch of the Dunning and Schuffan processes and notes on a simple method of producing blinking titles by cameras without a single picture device.

In an earlier issue the club's 'star projectionist' makes a plea for 'uniformity in the matter of leaders.' He points out that when a film is screened by someone

(Continued on next page)

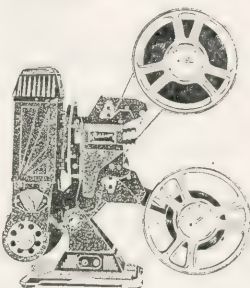


CHRISTMAS—IN SPITE OF HITLER

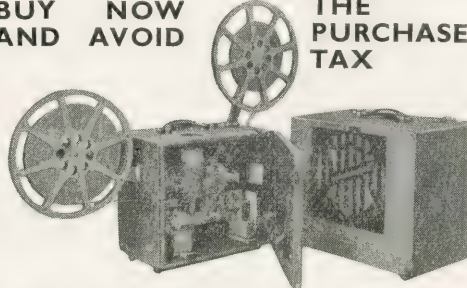
It won't be like other Christmases—but we have all made up our minds to make the most of it. The most sensible gift of all is one that will give the greatest pleasure to the greatest number and that undoubtedly is Home Talkies or Home Movies. While pre-purchase tax stocks last these will be sold FREE OF PURCHASE TAX. This applies to new and used goods, although it must be emphasised that growing scarcity must tend to make second-hand prices rise. Easy payments are still available—the first payment secures the goods. Our selection is very much greater than space permits us to show—tell us your requirements. If they can be met we are in the best position to meet them.

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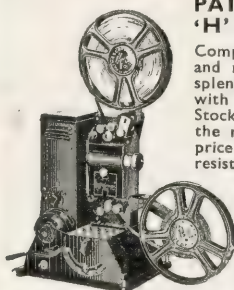
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unfamiliar with it, the first title may be missed and the end run out before the lamp is switched off. So he suggests a standardised method of splicing-in leaders and end-of-film strips.

The first leader should be not less than 2 ft. 6 in. long. It can be made up of clear film (scrap stock with the emulsion washed off with hot water) for the first 18 in., followed by a foot of black film. It is on this piece of black film that the lamp should be switched on. The main title should follow (or A.C.W. or Club leader, if any!) and it should be as long as two feet, if of simple wording, and up to three and a half feet if at all elaborate.

The reasons for this apparent over-dose of title are: the lamp may not be turned on in time to catch the first few frames, the projector may not attain full speed, slight focussing and framing adjustment may be necessary if the film happens to be the first one to be shown, and most audiences will continue talking and fail to pay attention to the screen at the moment of starting.

The 'end' title should be long enough to allow the operator to get out of his easy chair and find the lamp switch. He cannot always know when the end is coming, so I suggest 18 in. of this title, to be followed by a couple of feet or more of black film."

As the editor points out, now that meetings are few, the bulletin plays a more important role than ever. He hints that a change of editorial personnel would be beneficial, in that fresh ideas and change of viewpoint would be forthcoming. But, as the extracts given above indicate, the magazine is very good as it is, and he is to be congratulated on a completely worthwhile effort.

DUPLICATOR REJECTED

Sir,—I read with interest Mr. Oswald's letter in the November *Amateur Cine World*, and would like to prove to him that all of the club bulletins are not defunct. United Film Productions have for some time produced a modest little sheet, copies of which I enclose. The early numbers were speedily typed out by my wife at five copies a time. After a while we invested in a good duplicator, but after weighing the cost of stencils and the number of copies made, we have decided that it is cheaper to turn them out by hand.

The hardest job with running a club magazine is the great difficulty in getting articles from members. I find that those who will orate in the clubroom for hours on end on almost any subject are the hardest to get to write anything.

Should Mr. Oswald care for copies of our journal as they are issued from time to time I shall be pleased to forward them free of cost.

East Putney,
S.W.18.

J. SEARLE-SHIRLEY,
(Hon. Sec., United Film
Productions; Hon. Sec.,
W.T.I. Kine-photo Group).

"Sound Track," the U.F.P. magazine, clearly expresses the comradeship and co-operation that exist in the club. The issues sent us contain news of club activities, short articles on disc recording, a review of the *A.C.W.* 1939 "Ten Best" films and—an important feature which can be recommended to other societies—a list of mistakes, with suggestions for putting them right, apparent in a recent club production.—EDITOR.

WILL YOU HELP?

Sir,—As an ardent cinematographer and a regular reader, I should be indebted to you if you would kindly publish this letter.

We are a recently formed company and the entertainment problem is rather acute. I have been asked to give a few shows to the troops, but unfortunately I do not possess many films and the cost of hire is rather too steep for our slender means. So may I appeal to any of your readers who may be willing to loan us, for the cost of carriage, etc., any films which they think may appeal to the average soldier?

My projector is a Bolex G.916, so that 9.5mm. and 16mm. would be equally welcome. I can assure you that any films loaned would be under my personal care and would receive the treatment which the owners would desire. I should be very pleased to hear from the secretaries of any cine club who would care to help me in this way.

ALEX TAYLOR.

Sir,—Can anyone loan us 9.5mm. films for entertainment at our A.F.S. station during the winter evenings? They will be used on a Pathe 200B projector, and every care will be taken, though, of course, we cannot be responsible for damage due to enemy action or transit. We will pay postage both ways on receipt of films.

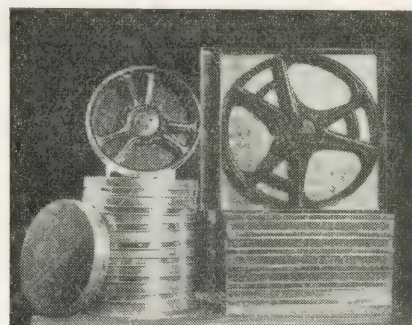
We have a two-reel drama, "Down Channel," in a reasonable condition, which we are willing to change for another two-reeler (S.B. titles) should anyone desire to do so.

H. SMALLBONE.

We should be glad to forward any offers to Mr. Taylor and Mr. Smallbone.—EDITOR.

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ROUND THE SOCIETIES

ALTHOUGH membership has dwindled somewhat of late, the **Hyde C.S.** (Hon. Sec.: E. A. Schoolden, "Edenhurst," 200, Dowson Road, Hyde, Cheshire) is carrying on. One of the most successful of recent meetings was the lecture by A. C. Whitehead, of the Bradford C.C., on special titling. He described his sturdy home-made titling outfit, showed photographs of it and also displayed various photographic and aerographic backgrounds. A novel device was a diamond wipe transition over a moving picture, produced by a series of cardboard cut-outs of gradually diminishing size. Mr. Whitehead also screened a number of his own films, including one on A.R.P.

There was an informal talk and demonstration of 8mm. Kodachrome on Nov. 8th, when several films from the Oswestry C.C. were shown. One or two members are busily engaged on private productions. G. Wain is at present editing two films.

* * *

"Of Food or Thought" (16mm. post-synch.) **United Film Productions'** picture (Hon. Sec.: J. S. W. Searle-Shirley, 25a, Cromford Road, East Putney, S.W.18) is now ready for printing, the rough cutting of the film having been completed. Arrangements for the regular monthly projection evenings have had to be revised, but it is hoped to resume them.

From September to June of the last projection season the club gave 23 shows, excluding A.R.P. shows, to a total of 742 people. This season it is hoped to screen to even greater numbers, as the new theatre that is to be built at 39, Gerard Road, Barnes, has double the seating accommodation of the club's former theatre.

* * *

The Dalmarnock Cine Circle and Social Club (Hon. Sec.: John Rankin, 70, Warriston Crescent, Glasgow, E.1) have vacancies for new members. The Circle specialises in 9.5mm. work.

* * *

Since production and projection activities have temporarily ceased, the social side of the **Wallasey A.C.C.** (Hon. Sec.: Vincent Bolton, 109, Wellington Road, Wallasey) is being developed. A billiards table and sundry games have been provided. The club has been able to arrange occasional Sunday afternoon meetings at which they hope to revive interest in cine work and, if possible, a few film shows will also be fixed up. Thus it anticipates being able to weather the winter and to resume more active work next year.

Illustrative Titles

(Continued from page 235)

That is to say, the title as illustrated was set up in an inverted position, and after the camera had exposed a foot or so, the woollen monster was slowly drawn out straight so as to coincide with the surface of the 'water.'

In projection the reverse occurs and the monster rises in a manner not more grotesque than that attributed to the original by some of the more sensational newspapers. This title generally gets a laugh, which is just as well, as the shot of the loch which follows is perfectly horrible, a featureless expanse of

(Continued on next page)

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Almost New. 16mm. Paillard Bolex Cinecamera; 1.4 Leitz Hektor 1 in.; 2.8 Hugo Meyer Telephoto; 1.5 Dallmeyer wide angle; with leather case. This is the latest model Bolex and has just been used a few times. A bargain, £80. Box No. 542, c/o Amateur Cine World, 300, Gray's Inn Rd., London, W.C.1.

Twin Turntable and Amplifier, complete with speaker and all cables, etc., £9 10 0. Projector stand, adjustable tilt, fitted with two sockets, switches and plugs, £4. Dekko camera Ross 1.9 lens, takes 50 ft. spools, or 30 ft. chargers, including leather case, £9. Highlight exposure meter £2. Box No. 541, c/o Amateur Cine World, 300, Gray's Inn Rd., London, W.C.1.

16mm. De Vry intermittent sprocket sound outfit in 2 carrying cases. 750w. lighting, 8w. Amplification, new condition. Very little used. Suit school, institution, etc. Complete with heavy all mains transformer, electric turntable, pickup, microphone, 4,160ft. spools, adjustable iron stand, speaker and extension cables. Demonstration any time. Cost £160. Cash offers wanted. Clive, Halstead, Kent.

(Continued in col. 2)

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(Continued from previous page)

water shot in frightful weather. But everyone looks at it with interest after the slightly novel introduction.

Making the Loch Lomond title demanded the patience of Job, simple as it appeared. To persuade the knitting wool to adhere to the outline of the lake called for the application of a hot iron and damp cloth as each turn was negotiated.

The signpost idea was used as a valuable continuity link. After we left Inverness our road lay south, right to the Border. The title preceded short sequences of numerous villages and views, introduced by moving-car shots of signs bearing unpronounceable names. To most people the names and locations would be unknown, but the title, "To the South" makes it evident that the camera is following a definite route, and a feeling of continuity is established. After a sequence of Edinburgh, introduced by a thistle motif in tartan, the signpost title is again used, to cover the journey right to the final shots of the car crossing the Border.

With regard to exposures, two one hundred watt lamps were used, in metal reflectors, twelve inches apart and eight inches in front of the title board. Normal speed, f/4.5, Pathescope S.S. film.

Effective Media

There are, of course, many other effective media besides fabrics for achieving illustrative titles. Models and sketches are two of them. The search for new materials for title 'painting' is a fascinating pursuit. Woolworths is a great source of inspiration to me. Saucepan scourers, chair webbing, cork table mats, door mats, towelling and curtain net are some of the titling materials I have obtained from that source.

Simple relief work on a sheet of plasticine is another method of title making that is well worth the trouble. For the best effect the lighting in the titler should be uneven, say one hundred watts from one side and sixty from the other, the exposure being duly modified.

Yet another medium in which interesting results may be obtained is embroidery on canvas. Co-operation of lady friends is indicated here, although a mere man can achieve respectable results in simple line illustration by this method.

Dekko, 9.5mm. motor drive, S-A., Universal resistance, good condition, case, £5 5 0 or offer. Advertiser, 49, Melrose Ave., Cricklewood.

8mm. Camera, Emel C96, f/1.9 focussing, back wind, including case. As new, £8 10 0. List £15 10 0. A. S. Root, 54, Hillingdon Rd., Stretford, Lancs.

Pathe Vox Projector, three 300 ft. Silent Cartoons. Only used very occasionally. Good condition, £50. F. W. Payne, Newall Ridge, Otley, Yorks.

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IMPORTANT "AMATEUR CINE WORLD" SERIES

SEVERAL readers have asked us if we can give them any suggestions for films that will enable them to make some contribution, however slight, to the national effort. The cine camera is one of the finest means of expression, instruction and propaganda available, but, as far as the amateur is concerned, very little use can be made of it in support of the war aim, other than to make entertainment films for troglodytes.

After examining and rejecting many schemes, we have, however, decided on one that will, we think, enable the amateur to make a very useful contribution to Civil Defence, without in any way coming up against the official restrictions. Now, after some months of preparation, the scheme is nearly complete. The first article will be published very shortly—next month, it is hoped.

Simple Cartoon Sequences

Ideas will be given with, where necessary, a detailed script, for the production of cameo films illustrating matters of public interest. Many misguided people, for instance, still continue (like ourselves!) to sleep upstairs. The script of the first film convinces us that we shouldn't. Like other films in the series, it makes use now and again of simple cartoon sequences (in this particular case to show how blast goes upwards and outwards and how, therefore, the upper parts of a building are more prone to danger).

But you are no good at drawing? You won't need to do any, for the drawings themselves will be provided and all you will have to do is cut them out and film them in your titler. By exposing so many frames on each picture, an illusion of movement is obtained.

The films will be quite short—an average of 100 ft. each—and since not all of the filming will be entirely straightforward, they will provide many hours of interest and amusement at minimum expenditure. And you will have, in addition, the satisfaction of knowing that you are doing something worth while.

Back Projection

(Continued from page 233)

actors and technicians who also had to time their actions to fit. Perhaps it is now clear how important the question of timing may become.

But it isn't always the only problem of back-projection. We will close this article by reminding the reader of a shot in the first "Topper" film. It was, on the face of it, a straightforward back-projection shot of Cary Grant driving a car—exactly similar to the first example we described above. But in the middle of the scene, Cary Grant slowly faded into thin air, leaving the car running down the road, apparently empty. The road was back-projected, but we will leave it to the reader to puzzle out how this could have been combined with the fading out of the driver!



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